

IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN
DISTRICT OF TENNESSEE AT KNOXVILLE

CONTRACT MANAGEMENT, INC., Plaintiff, vs. BABCOCK & WILSON TECHNICAL SERVICES Y-12, LLC, Defendant.	FINDINGS OF FACT AND CONCLUSIONS OF LAW Case No. 3:10-cv-110
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The court heard the above-captioned matter in a five-day bench trial that began on July 9, 2012. Based on the record that was made at the trial and in three subsequent depositions, the court now issues its Findings of Fact and Conclusions of Law.

BACKGROUND

Defendant Babcock & Wilcox Technical Services Y-12, LLC (B&W Y-12) is the managing operator of the Y-12 National Security Complex (Y-12), which is owned by the Department of Energy (DOE) and located in Oak Ridge, Tennessee. In December 2008, B&W Y-12 subcontracted with Plaintiff Contract Management, Inc. (CMI) to clean and line certain water lines at Y-12. The subcontract was part of the larger Potable Water Systems Upgrade (PWSU) Project, which was congressionally funded.

After CMI was awarded the subcontract, Congress imposed a three percent rescission on the PWSU Project. As a result, B&W Y-12 decreased the scope of work in CMI's subcontract

and eliminated four of the five water lines that CMI was originally going to rehabilitate. Because of disputes about how this change should affect CMI's contract price, and due to a number of delays over the course of the project history, CMI filed this action against B&W Y-12 for breach of contract.

The court has subject matter jurisdiction over this action under 28 U.S.C. § 1332 because the parties are diverse and the amount in controversy exceeds \$75,000.

FINDINGS OF FACT

I. Relations Before the Award of the Subcontract

A. B&W Y-12's Government Contract

B&W Y-12 manages and operates the Y-12 facility under a contract with the National Nuclear Security Administration (NNSA).¹ This agreement, known as a “management and operation” (M&O) contract, governs the activities of a contractor who manages a government-owned facility that is “principally devoted to one or more major programs” of a government agency. 48 C.F.R. § 17.601. Here, the government-owned facility (Y-12) is a nuclear weapons production facility, see 50 U.S.C. § 2471(2)(C), and the government agency (the NNSA) has responsibility for “all national security functions and activities” at that site. 50 U.S.C. § 2481(a)(4). The M&O contract between B&W Y-12 and the NNSA is not a fixed price contract. (Tr. 1009 (Wilson).) Instead, the government reimburses B&W Y-12 for any allowable costs of managing and operating the facility. (Tr. 1012-13 (Wilson).) B&W Y-12's profit comes from an award fee that is paid separately by the DOE. (Tr. 1009 (Wilson).)

¹The NNSA is a separately organized agency that is part of the Department of Energy. See 50 U.S.C. § 2401(a).

B. The Basic Ordering Agreement

In the fall of 2007, B&W Y-12 and CMI entered into a Basic Ordering Agreement (BOA). The BOA is not itself a subcontract, but an opportunity to bid on future projects that B&W Y-12 publicizes as Task Releases. (Tr. 366-67 (Bowden)); see also, 48 C.F.R. § 16.703(a). If the opportunity for a Task Release arises, B&W Y-12 issues a request for lump sum offers (a “solicitation”) which sets forth information about the specific Task Release. (Ex. 3, at 321.²) B&W Y-12 then evaluates the offers that are submitted by BOA holders and awards the task to one of them. (Id.)

C. The Solicitation for the Project

In September 2008, B&W Y-12 issued a Solicitation to certain BOA holders for a project to clean and line certain existing water lines at Y-12 (the Project). (Tr. 14 (Bowden); Ex. 136.) Specifically, the existing cast iron potable water lines needed to be cleaned and rehabilitated by inserting polyvinyl chloride (PVC) liners into them. (Ex. 4, at 703.) The Project was part of the larger PWSU Project, which was a line item project included in the federal budget to fund needed repairs and upgrades to Y-12’s potable water supply and distribution system. (Tr. 709-12 (Blair).)

The Solicitation incorporated various documents by reference. These documents included the General Terms and Conditions (Ex. 2), the Supplemental Conditions (Ex. 6), the successful subcontractor’s BOA, and Construction Specifications that were dated August 14, 2008 (the Specifications) (Ex. 4). The Specifications included a number of drawings that were

²Citations to exhibit page numbers refer to the Bates numbers affixed to the exhibit by the parties. If no Bates number is available, the court will refer to the page of the PDF file.

issued by B&W Y-12 that showed that the pipe to be cleaned was located at depths of approximately four to five feet. (Tr. 27 (Bowden); Ex. 136.) CMI reviewed the Solicitation and the incorporated documents and attended a pre-bid walk-through at the site. (Tr. 15-17 (Bowden).) During the walk-through, CMI was not allowed to make any excavations to determine the actual depth of the pipes. (Tr. 44-45 (Bowden).)

The Solicitation stated that B&W Y-12 would perform preparatory excavations so that the subcontractor could access the water lines. (Ex. 4, at 704.) In an email dated October 14, 2008, Penny Wiseman, who was B&W Y-12's Subcontract Administrator, confirmed that the subcontractor would not have any excavation responsibilities in its scope of work. (Ex. 137; Tr. 43 (Bowden).) B&W Y-12 would also provide shoring for the excavations³ and keep them free from water. (Ex. 4, at 705; Tr. 238 (Bowden).) The proposed work scheme was as follows. After B&W Y-12 dug the pits, CMI would open the existing water line and inspect the interior. (Ex. 4, at 728-29.) CMI's subcontractor, Underground Solutions, Inc. (UGSI), would clean the line and insert a PVC liner. CMI would then reconnect the water line and test the line to make sure it met minimum pressure specifications. (Id.) Finally, B&W Y-12 would fill in the excavations. (Ex. 4, at 704.)

The Solicitation specified that BOA holders who bid on the subcontract must agree to perform the necessary work at the prices which the subcontractors offered in Section B of the Solicitation. (Ex. 136, at 1.) Section B described the five water line sections that needed cleaning and lining and required bid offerors to propose a separate unit price for each bid item. (Ex. 136, at 2.) But, in Section I.10, the Solicitation prohibited CMI from loading its costs into

³The parties also refer to the excavations as pits.

one line item and creating an unbalanced bid (Ex. 136, at 14; Tr. 219 (Bowden)). Instead, the BOA allowed the subcontractor to distribute work and services within the given pay items at its discretion when there were no specific pay items that described those services. (Ex. 3, at 12.) The court finds that CMI distributed its key personnel, labor, and management costs among the five proposed water line sections in order to avoid an unbalanced bid. (Tr. 68-69 (Bowden).) These costs were related to the total duration of the Project, but CMI planned to work on multiple water lines at the same time. (Tr. 135-36 (Bowden).) As a result, CMI could not and did not isolate these costs for each of the five water lines individually. Instead, CMI distributed the overall management and labor costs of the entire Project between the five line items. In October 2008, CMI provided B&W Y-12 with a breakdown that demonstrated how CMI had distributed its costs among the bid items. (Ex. 140.)

The Solicitation did not establish a date for the commencement of work. But it did include an “anticipated schedule,” which stated that the “dates may be changed at any time depending on Company requirements.” (Ex. 136, at 9.)

II. Relations After Award of the Subcontract and Before Commencement of Work

A. The Subcontract Award

B&W Y-12 accepted CMI’s offer and awarded the Subcontract to CMI on December 15, 2008. (Tr. 80-81 (Bowden); Ex. 1.) With the exception of the “anticipated schedule” provision, the relevant Subcontract terms were the same as the terms in the Solicitation. The Subcontract required that work be completed by May 31, 2009. (Ex. 1, at 1506.) But the Subcontract did not state when CMI would start work or when B&W Y-12 would issue a Notice to Proceed. (Tr. 376-77 (Bowden).) Instead, CMI’s Project Manager, Barrett Bowden, testified that there were

“verbal communications between CMI and B&W Y-12 that we were planning to start approximately February 20th.” (Id.) B&W Y-12 would not issue a Notice to Proceed until CMI had prepared and obtained B&W Y-12’s approval on a number of documents, which the parties refer to as “submittals.”

B&W Y-12 did not authorize CMI to proceed in late February 2009 as originally planned. It was not until March 12, 2009, that B&W Y-12 issued a Limited Notice to Proceed, and not until April 20, 2009, that B&W Y-12 authorized CMI to begin physical construction work.⁴ The parties present a number of arguments about the cause of this delay. Most importantly, the parties debate the impact of the submittal process and the timing and impact of Modification No. 1 (which was issued on March 24, 2009).

B. Delay in the Submittal Process

On December 17, 2008, Robert Monleon, the Subcontract Technical Representative (STR) for B&W Y-12, informed CMI that CMI had to provide certain required “submittals” in order to begin work in February 2009. Once CMI provided a submittal, B&W Y-12 would review it and give it a status according to one of the following four options:

1. “Work May Proceed”
2. “Revise and Resubmit – Work may proceed subject to incorporation of changes”
3. “Revise and Resubmit – Work may not proceed”
4. “Review Not Required”

(Ex. 4, at 719.) B&W Y-12 had twelve working days after submission in which to review and

⁴The Limited Notice to Proceed allowed CMI to perform activities like starting the personnel badging and training process, delivering and setting up the office trailer on site, and mobilizing and delivering equipment. (Tr. 106-07 (Bowden).) The Full Notice to Proceed set the date on which CMI was authorized to begin physical work on site. (Tr. 118 (Bowden).)

approve (or disapprove) a submittal.⁵ (Ex. 4, at 718.)

CMI maintains that B&W Y-12 was responsible for the delay in the submittal process. According to CMI, B&W Y-12 was slow in reviewing CMI's submittals. For instance, CMI asserts that B&W Y-12 never responded to the "baseline schedule" that CMI submitted on December 30, 2008, and that B&W Y-12 waited until February 26, 2009, before responding to the schedule that CMI submitted on January 12, 2009. (Tr. 94-95 (Bowden); see also Ex. 157.) CMI further points out that it submitted its Activity Hazard Analysis (AHA) Plan on January 15, 2009, but did not receive the returned plan until February 19, 2009, when B&W Y-12 gave the submittal a status of "3." (Ex. 157.)

CMI also argues that it was hindered during the submittal process because B&W Y-12 would continue to change its comments when it sent back CMI's submissions. For example, Mr. Bowden testified that CMI was delayed in getting its Task Specific Environmental Safety & Health (ES&H) Plan approved because B&W Y-12 kept changing what it wanted to include in the plan. (Tr. 96-97 (Bowden).) John Wells, who was CMI's Project Superintendent, corroborated Mr. Bowden's testimony. Mr. Wells stated in his deposition that, for the Task Specific ES&H Plan, CMI would make a submittal, receive comments from B&W Y-12, resubmit, and then get back different comments of what B&W Y-12 wanted CMI to include. (Wells Dep. 10, 152-53, Ex. 502.)

B&W Y-12 characterizes these events differently. B&W Y-12 claims that on January 8, 2009, B&W Y-12 and CMI had a kickoff meeting in which they discussed the baseline schedule

⁵B&W Y-12 works on a "4x10" schedule. Employees work ten hours a day, four days a week. The Subcontract defined "working days" in the same manner. As a result, twelve working days corresponds to three weeks.

that was submitted on December 30, 2008. (See Tr. 95 (Bowden); Ex. 158.) At that time, B&W Y-12 asked CMI to provide a full schedule by January 12, 2009. (Id.) B&W Y-12 also points out that CMI did not wait until February 26, 2009, to receive comments on the full baseline schedule. Instead, Mr. Monleon sent CMI a number of comments about the proposed schedule on January 15, 2009. (Ex. 163.)

B&W Y-12's Project Manager Melissa Blair⁶ agreed that the two submittals that caused the most problems were the AHA and the Task Specific ES&H Plan. (Tr. 724-25, 729-30 (Blair); Tr. 942 (Monleon).) B&W Y-12 argues that it had more contact with CMI concerning the AHA than CMI suggests. Mr. Monleon testified that on January 9, 2009, he received a request from Jesse Burch-Kennedy to share an example of an approved AHA from another project. (Tr. 866-67 (Monleon); Ex. 194.) Mr. Monleon sent Ms. Burch-Kennedy an example of an AHA from a project to remove an old locomotive and rail cars. (Id.) He expected CMI to use this example as a template. (Id. at 867.) But when CMI submitted the first draft of the AHA on January 15, 2009, Mr. Monleon found that CMI had "basically cut and paste[d]" the example he sent to them. (Id.) "CMI had neglected or ignored the fact that some activities still present in the original AHA still cited the locomotive, still cited cars and in some cases still had the letterhead of the original company that produced the AHA." (Id.)

B&W Y-12 cites a letter dated February 17, 2009, from James Williams, CMI's owner, to Ms. Wiseman, in which Mr. Williams acknowledges that CMI received "verbal instructions" on the AHA and other submittals. (Tr. 518-19 (Williams); Ex. 182.) And it is undisputed that CMI submitted a revised AHA to B&W Y-12 on February 4, 2009. (Ex. 194.) As a result, the court

⁶At the time of the Project, Ms. Blair went by the name Melissa Portwood.

finds that B&W Y-12 verbally communicated its concerns about the AHA to CMI before February 26, 2009.

B&W Y-12 disputes CMI's assertion that B&W Y-12 kept making additional comments on the Task Specific ES&H Plan. On February 24, 2009, B&W Y-12 sent comments to CMI asking CMI to clarify several questions about the hoisting and rigging activities. (Ex. 427.⁷) After CMI resubmitted the Task Specific ES&H Plan to address these concerns, B&W Y-12 responded on March 10, 2009, with comments related to the safe operation of a crane. (Id.⁸) The court finds that these additional comments are clarifications, and not new requirements. But the court also finds that B&W Y-12's initial comments were not always clear enough to allow CMI to make the requisite changes in a timely fashion.

Submittal issues reached a boiling point in mid-February, when B&W Y-12 refused to permit CMI to deliver and unload PVC piping material on site because the AHA and Task Specific ES&H Plan had not been approved. (Tr. 865 (Monleon); Ex. 181.) This issue prompted the parties to schedule a telephone conference. (Tr. 520 (Williams).) During the conference, Ms. Blair told Mr. Williams that some of CMI's submittals were "pathetic." (Id.) Ms. Blair testified that she was receiving reports that the quality of CMI's submittals was consistently poor and that she felt she needed to take a firm stand. (Tr. 726 (Blair).) After the conference, Mr. Williams sent B&W Y-12 a letter expressing his frustration with the submittal process and asking for clarification about B&W Y-12's requirements for the AHA and Task Specific ES&H Plan,

⁷Trial Exhibit 427 does not include page numbers. The correct page may be found by searching for the Transmittal Date in the upper right-hand corner: 2/24/2009.

⁸This document may be found two pages after the previous citation.

among others. (Tr. 518-19 (Williams); Ex. 182.) B&W Y-12 responded with a letter of its own on February 19, 2009, in which it explained why it had not accepted the AHA submittals and offered the help of “subject matter experts” to assist and answer any further questions that CMI had. (Tr. 676 (Wiseman); Ex. 187.) This episode illustrates the basic tensions between CMI and B&W Y-12 during the submittal process. While B&W Y-12 had the contractual right to prevent CMI from unloading the PVC piping until the submittals had been approved, B&W Y-12 also failed to provide the clarifications and quick turnaround that was needed to keep the Project moving along.

The court finds that both parties were at fault for the delays that occurred during the submittal stage. Some of the submittals provided by CMI, such as the first draft of the AHA, were inadequate. And B&W Y-12 has demonstrated that it provided CMI with verbal comments in order to fix the problems with its submissions. But the court also finds that B&W Y-12 did not process the submittals in a timely fashion. John Wells, who compiled the Task Specific ES&H Plan and had many years of experience compiling and reviewing submittals, testified that he believed the Task Specific ES&H Plan complied with the requirements of the Subcontract. (Wells Dep. 8-9, 152, Ex. 502.) The court cannot hold that this draft was in compliance or that B&W Y-12’s concerns were unreasonable. But the court has not seen any evidence that the draft was so riddled with problems that it should have required such an extensive period of time to ultimately approve the plan. B&W Y-12’s failure to provide clear and timely comments caused a delay that was at least equal to the delay caused by the problems in the submittals in the first place. As a result, the court finds that the parties were equally responsible for any delays that were caused by the submittals.

C. Effect of Modification No. 1

On March 4, 2009, B&W Y-12 learned that Congress had rescinded three percent of the funding for the PWSU Project at Y-12. The rescission, which was part of the Omnibus Appropriations Act for Fiscal Year 2009, eliminated \$830,000 from the overall PWSU Project budget. After the NNSA told B&W Y-12 about the change, B&W Y-12 prepared a spreadsheet to review the scope of the PWSU Project. (Ex. 253; Tr. 611 (Benton).) Ms. Blair testified that she reviewed “each of the major pieces of scope within the [PWSU] Project” to determine where B&W Y-12 should cut costs on the project. (Tr. 730-31 (Blair).) Because Ms. Blair could not cut funding to two large water tanks and an underground transmission line, she determined that the least risky place to cut costs would be to remove four of the five underground water lines that were part of CMI’s Subcontract. (Tr. 734 (Blair).) B&W Y-12 also descoped some work that it could have performed with its own employees. (Tr. 614 (Benton); Ex. 253, at 598; Tr. 734-35 (Blair).) B&W Y-12 submitted the proposed cuts to the NNSA’s Y-12 Site Office and the recommended cuts were approved on March 24, 2009. (Ex. 253.)

While B&W Y-12 was making a determination about how to cut costs, it issued a Limited Notice to Proceed to CMI on March 12, 2009. (Tr. 106-07, 431 (Bowden); Ex. 222.) The notice instructed CMI that it could begin training, set up its offices, and mobilize equipment and deliver materials needed to rehabilitate the M6-01 line. (Id.) B&W Y-12 emphasized that the only mobilization that could begin was for the M6-01 line, which was the longest of the five sections of water pipe that were included in the original scope of the Project. (Ex. 222; Ex. 1, at 1504.) The notice tentatively scheduled the date on which physical construction could begin for April 6, 2009. (Ex. 222.) On March 16, 2009, B&W Y-12 sent an email to CMI that stated: “B&W Y-12

management has made the decision to descope all work EXCEPT the M6-01 line under the subject subcontract.” (Ex. 226.)

On March 24, 2009, B&W Y-12 issued Modification No. 1. (Ex. 8.) This document changed the Subcontract by deleting all of the water lines other than the M6-01 line from the scope of the Project. (Id.) Because of the reduced amount of work, Modification No. 1 also adjusted the Subcontract by deducting \$769,104.63 from the total price. (Id.) B&W Y-12 calculated this figure by deleting the amounts that CMI had quoted for the four lines that were removed from the price of the Subcontract. (See Ex. 1.) B&W Y-12 then asked CMI to submit a proposal for costs incurred as a result of the change in work scope. (Exs. 226 & 240.) It was B&W Y-12’s position that CMI could only adjust the \$769,104.63 figure by providing evidence of costs that CMI had incurred before March 24, 2009. (Ex. 290, Tr. 149-50 (Bowden).)

CMI disputed the method that B&W Y-12 used to calculate the Subcontract price adjustment. In a Request for Equitable Adjustment (REA) that CMI submitted in response to Modification No. 1, CMI asserted that it would not save any of the management costs that had been included in the four line items that were deleted, for reasons that the court will discuss below. (Ex. 281.) Instead of reducing the Subcontract price by the stated amounts for the four water lines and then adding back to the price any incurred costs, CMI argued that the better method was to deduct from the full Subcontract price the cost of labor, materials, and subcontractor costs that were no longer incurred as a result of the modification. (Id.)

Because the REA was never resolved, CMI submitted a Certified Claim for Equitable Adjustment for Modification No. 1 on December 9, 2009. (Ex. 407.) After that claim was reviewed by an independent public accountant, CMI slightly adjusted the amount of the

deduction that it believed was appropriate under Modification No. 1 to \$446,154.54. (Ex. 439.) CMI's claimed deduction represents a \$322,950.09 difference from the amount of the deduction calculated by B&W Y-12. This figure makes up part of the damages that CMI seeks from B&W Y-12 in this suit.

The court will analyze the proper contractual method for calculating this deduction in its Conclusions of Law. Here, the court notes a number of factual disputes that are relevant to the issue. First, B&W Y-12 did eventually agree that CMI was entitled to additional funds under Modification No. 1. Specifically, B&W Y-12 conceded that \$151,962.02 of CMI's claim was fair and reasonable and that, if CMI could prove it, CMI would be entitled to an additional modest amount for unrecovered management costs. (Tr. 680 (Wiseman).) But B&W Y-12 did not provide the court with an explanation of how it came up with the \$151,962.02 figure,⁹ although it agreed that the amount included \$81,137.72, a figure which CMI requested as expenses for its subcontractor, UGSI. There remains a dispute between the parties over whether UGSI is also entitled to \$20,284.43 for overhead and profit. (Tr. 172 (Bowden); Ex. 407, at 6047-48.)

Another source of contention between the parties concerns management costs. As noted above, CMI believes that Modification No. 1 did not save CMI any management costs as a result of the deleted water lines. Part of CMI's reasoning is that many of its management costs for the

⁹B&W Y-12 argued in its Proposed Findings of Fact and Conclusions of Law (Dkt. No. 98, at 34-35) that CMI's assertion of attorney-client privilege over an email on October 19, 2009, effectively precludes B&W Y-12 from being able to explain how it came up with the amount. But even if B&W Y-12's explanation is accurate, the court still cannot use this amount to calculate the proper deduction under Modification No. 1 because it does not know what this figure represents.

M6-01 line were embedded within the amounts that were bid on the four deleted line items. As noted above, the court finds that CMI did distribute these costs and may recover them.

CMI argues that its management costs were actually increased and posits a number of theories about why this increase occurred. All of these theories are premised on the fact that, after Modification No. 1 was issued, the end work date was pushed out to July 2 instead of May 31. First, CMI notes that Modification No. 1 had the effect of changing the sequence of the planned work. (Ex. 232; Tr. 801 (Blair).) Under the original schedule, CMI planned to begin working on M6-05 before it began work on M6-01. When the cleaning and lining of M6-05 was removed from the scope of the Project, M6-01 became the first and only water line in the Project, and CMI now needed excavations on that line first. (See Ex. 23.) But the court is not convinced that this change had a significant impact on the schedule since CMI was on notice since March 12, 2009, that it should begin mobilization activities for the M6-01 line only. (Tr. 106-07, 431 (Bowden); Ex. 222.) The court also disagrees with CMI that Modification No. 1 was issued late. B&W Y-12 sent out Modification No. 1 within three weeks from the date when it became aware that the government was cutting its funding. The modification was issued on March 24, 2009, the same date that B&W Y-12 learned that its cuts had been approved by the NNSA. The court finds that these times were reasonable.

But the court finds that there were other legitimate reasons why the Project end date had to be extended until July 2, 2009. After Modification No. 1 was issued, B&W Y-12 asked CMI to prepare a new schedule for the remaining water line, M6-01. (Tr. 124-35 (Bowden).) The new schedule moved the end date of the Project from May 31, 2009 to July 2, 2009. (Ex. 23; Tr. 128-34 (Bowden).) The court finds that this extension was due in part to the delays that occurred

during the submittal process. As the court has discussed above, both parties were at fault for these delays. But two weeks of this extension can be attributed to B&W Y-12's decision to move the date on which physical work could begin from April 6, 2009, to April 20, 2009. This decision was announced at a meeting on March 25, 2009, when B&W Y-12 stated that although it had already obtained an excavation permit for the M6-01 line, it needed until April 20, 2009 to have the excavations ready for CMI. (Exs. 230, 244, 246, 254; Wells Dep. 11, Ex. 502; Tr. 117-18 (Bowden); Tr. 671 (Wiseman).) After the meeting, on March 26, 2009, B&W Y-12 issued the Full Notice to Proceed. (Ex. 246.) The Full Notice to Proceed allowed work to commence on site on April 20, 2009. (Id.)

B&W Y-12 argues that CMI was not prejudiced by this delay. First, B&W Y-12 asserts that CMI did not provide B&W Y-12 with the new Project schedule until April 15, 2009. (Tr. 728-29 (Blair); Tr. 127 (Bowden); Ex. 23.) CMI could not start any work until B&W Y-12 approved this schedule. (Tr. 432 (Bowden); Exs. 23, 218, 261.) But CMI submitted the schedule before the April 20 start date. And the court cannot speculate about what would have happened if B&W Y-12 had told CMI to proceed with the April 6 start date at the March 25 meeting. It is quite possible that CMI would have submitted its schedule much sooner if B&W Y-12 had not changed that date.

B&W Y-12 also argues that, in any event, CMI was not ready to begin work on April 20. But CMI's readiness as of April 20 should not have affected the calculations of the proposed end date in the new schedule. Even if CMI was unable to start work until April 27, as B&W Y-12 alleges, the court finds that those allegations should be considered in the context of CMI's claim under Modification No. 4, which concerns the on-site delays that were encountered during the

physical construction work.

As a result, the court finds that when the end date of the Project shifted from May 31 to July 2, two weeks of this change were caused by B&W Y-12's failure to have the excavations ready and its decision to move the Project start date from April 6 to April 20. The rest of the delay was due to the problems encountered during the submittal process, which the court has determined was the fault of both parties.

Because the end date of the Subcontract was extended by five weeks, CMI had additional management costs during this time. And since Modification No. 1 did not delete Section G.3 from the Subcontract, which was the provision that required CMI to retain four key management personnel as "essential to the work being performed" under the Subcontract, CMI needed to have its key personnel available during this extra time. (Ex. 1; Tr. 218-19 (Bowden); Tr. 650 (Wiseman).) CMI also asserts that, as a practical matter, CMI would not have known if it would be able to hire back its key personnel if it had laid any of them off. (Tr. 349-50 (Bowden).) The court finds that CMI did not have the contractual or practical ability to reduce its management costs during the extra five weeks that the Project end date was extended.

In its initial REA, CMI reserved its right to seek delay and impact costs that were associated with Modification No. 1. (Ex. 281; Tr. 138-39 (Bowden).) But the court finds that it has already discussed any delays that contributed to the extension of the Project end date to July 2, 2009. The delays that were encountered on-site during the period from April 20 to July 2 are more properly considered under CMI's claim for an equitable adjustment under Modification No. 4, which moved the end date of the Project from July 2, 2009, to September 23, 2009.

III. Relations Once Work Had Begun: Modification No. 4

The Project continued to encounter problems and delays after April 20, 2009, the date on which B&W Y-12 authorized CMI to begin physical work. As a result of these delays, B&W Y-12 issued Modification No. 4 on August 17, 2009. This change extended the time for performance of the Subcontract to September 23, 2009. (Ex. 12.) But even this extension proved to be too optimistic. CMI did not complete its work at the Project site until October 21, 2009.

After B&W Y-12 issued Modification No. 4, CMI submitted a number of documents in which it asked B&W Y-12 for an equitable adjustment, including an REA, a Certified Claim, and a revised version of its Certified Claim. (Exs. 392, 410, 423.) After making some minor changes, CMI ultimately determined the amount of the equitable adjustment that it believed it was owed by B&W Y-12 to be \$456,006.01. CMI calculated the equitable adjustment as follows:

Extended management costs from July 2, 2009, until September 23, 2009	\$148,062.50
Extended management costs from September 23, 2009 to October 21, 2009	\$66,533.12
Additional job burden costs	\$37,871.52
Delay costs for specific items from Daily Activity Reports	\$66,243.96
Impact costs not included in other claim amounts	\$137,294.91
Total of above items	\$456,006.01

(Ex. 460.) B&W Y-12 disputes these figures and argues that, at most, CMI is entitled to \$4,977.86 for a delay that occurred on June 8, 2009. (Ex. 372, at 2941.)

A. Reasons for the Project Delay

CMI argues that B&W Y-12 caused the Project to be delayed because it failed to uphold several of its duties under the Subcontract. Most importantly, CMI alleges that B&W Y-12 did not excavate the pits in a timely manner, that the excavations were not dug according to CMI's specifications, that B&W Y-12 did not maintain the pits free of water, and that the drawings provided by B&W Y-12 were inaccurate in a number of key details. B&W Y-12 disputes these assertions and has brought a counterclaim of its own, in which it argues that CMI was responsible for the delays and that CMI must reimburse B&W Y-12 for a number of expenses that B&W Y-12 incurred during the course of the Project. The court will address the arguments of both parties about the various reasons why the Project was delayed.

1. Timeliness of the Excavations

The parties disagree over how the release of excavation sites affected the work. CMI argues that it was delayed and less efficient because B&W Y-12 failed to open all of the excavations on M6-01 at one time. B&W Y-12 maintains that it continuously worked with CMI, asking CMI in weekly meetings where CMI would be working so that B&W Y-12 personnel could prepare and maintain the pits ahead of when CMI needed them.

One of the main disputes concerning the pits centered on the parties' differing interpretations of how many excavations should be open at a given time. The Construction Specifications did not specify the number of excavations that would be open. Instead, they stated that the subcontractor must "[m]inimize the number of access points needed" and install the pipe liner and reestablish connections in a way that "minimizes the excavations and minimizes the disruptions to users." (Ex. 4, at 729.) Before the Subcontract was awarded, CMI provided B&W

Y-12 a response to a request for clarification about the pits which stated that “for initial scheduling purposes, it must be considered that all pits within a bid item will remain open for the duration of that activity.” (Tr. 73-74 (Bowden); Ex. 143, at 2.) At that time, Mr. Bowden predicted that the M6-01 line would require about forty pits. (Tr. 74 (Bowden).) But Mr. Bowden also noted, “This time [that the pits are open] may be reduced as a more detailed schedule is developed during the preliminary planning phase of the Project.” (Tr. 409 (Bowden); Ex. 143.) Ms. Blair testified that she interpreted this statement to mean that CMI would provide “a more detailed schedule that would show improvement with the amount of time that it would take for a pit to be open.” (Tr. 775 (Blair).)

On April 9, 2009, CMI and B&W Y-12 had a progress meeting that was attended by Mr. Wells from CMI and a number of employees from B&W Y-12. (Tr. 124 (Bowden); Ex. 256.) To prepare for this meeting, CMI provided B&W Y-12 with a chart that depicted when each excavation would need to be opened and for how long it would need to remain open in order to complete the work according to the April 15, 2009, schedule. (Tr. 120, 473 (Bowden); Ex. 255.) The chart indicates that the largest number of pits that CMI contemplated would be open at one time was twenty-one, which was scheduled to occur on May 26, 2009. (Tr. 123 (Bowden); Ex. 255.) But the chart also shows that, of the forty pits that CMI originally believed were necessary for M6-01, most weeks required somewhere between eight to sixteen pits to be available. (Id.) The court finds that CMI’s estimation was reasonable and that it accurately reflects Mr. Bowden’s statement that, as the Project progressed, CMI would improve on its original assertion that all pits would need to be open for the duration of a bid item. (Ex. 143.)

Don Hayes, who was B&W Y-12’s construction manager, disagreed. At the April 9,

2009, meeting, he stated that it was not possible to have so many pits open at the same time. Mr. Hayes testified that he told Mr. Wells,

[T]his is not how the work is going to be done . . . because we knew the work would not be ongoing with that many open pits at one time. There was no logical reason for it to happen that way. We did have a discussion and said, look, we need to layout exactly how you are going to do the work so we will have the minimum number of holes open that you need and we will always have holes in front of you open so that you are never delayed.

(Hayes Dep. 18, Dkt. No. 97.) B&W Y-12 wanted to have excavations open only if CMI was going to be working in that pit within the next few days. (Id. at 61.) Ms. Blair agreed that it would not be possible for B&W Y-12 to open and maintain the pits according to CMI's schedule: "The most we thought we could handle was probably four to five pits." (Tr. 777 (Blair); Ex. 430 at 904.) B&W Y-12 felt that having all the pits open at once was not safe: "You don't want to have excavation pits open, unless you absolutely have to have them open and you are working in them." (Tr. 778 (Blair).) But Mr. Wells testified that Mr. Hayes informed him that the reason why B&W Y-12 could not have more open pits was because B&W Y-12 lacked the shoring material and the personnel to perform the excavations. (Wells Dep. 18-20, 24-25, Ex. 502.)

The excavations were not opened according to CMI's proposed schedule. According to CMI, ten of the pits were not excavated by B&W Y-12 until after the July 2, 2009, completion date listed in the revised schedule of April 15, 2009. (Ex. 453; Tr. 230-31 (Bowden).) Five of these pits were not released to CMI until after September 8, 2009, and the last two pits were not released until October 6, 2009. (Id.) Mr. Wells testified that as of July 7, 2009, CMI personnel were being delayed until a new excavation was turned over. (Wells Dep. 39-40, Ex. 502.) At that time, there were no excavations past site 4A that were ready. (Id.) Mr. Wells also testified

that, when CMI got to the pits on the north side of the creek (Excavation Nos. 12 and above), these excavations did not have the proper safety restrictions, such as hand rails or ladders, that CMI required to get into the excavations and perform its work. (Id. at 159-60.)

B&W Y-12 agrees that many of the excavations were not released according to the dates set by the revised April 15, 2009, schedule. Ms. Blair testified that B&W Y-12 did not pay attention to the schedule to determine when each excavation needed to be released. (Tr. 811-12 (Blair).) Instead, she and other B&W Y-12 personnel talked to Mr. Wells “on a weekly basis” and asked him, “[W]here are you? When do you need to have that pit open? We didn’t pay attention—we ignored basically the Schedule on when he said he needed it because that wasn’t what was happening in the field.” (Id.) Kenny Cox, who managed the excavations for B&W Y-12, agreed with Ms. Blair’s testimony. The weekly meetings, he said, were “to coordinate where [CMI] was going to be at and make sure the hole was open.” (Tr. 1000 (Cox).) Mr. Cox stated that CMI never waited on an excavation. “I made sure they was [sic] ready every time they needed their hole.” (Tr. 999 (Cox).)

The court finds that Mr. Cox’s testimony is not persuasive on this point. His statement is directly contradicted by Mr. Wells’s assertion that by July 7, 2009, CMI was being delayed until a new excavation was turned over. (Wells Dep. 39-40, Ex. 502.) According to Mr. Wells, CMI caught up with B&W Y-12 when it released Excavation No. 4, and for half to three fourths of the Project CMI was waiting on B&W Y-12 to open excavations. (Id. at 21-22.) His statement is corroborated by a number of Daily Activity Reports. (Exs. 98, 99, 457.) Mr. Wells further testified that he often requested that more pits be opened at the weekly meetings. (Wells Dep. 23-24, Ex. 502.) B&W Y-12 worked several weekends to make sure the pits were open. (See

Tr. 992 (Cox); Wells Dep. 135-36, 153-54; Ex. 99, at 1064.) But this evidence does not prove that CMI never waited on an excavation, since it just as easily shows that B&W Y-12 was behind and needed to work overtime to catch up.

Mr. Bowden provided a number of updated schedules throughout the course of the Project in which he indicated the required completion date for each of the pits so that the completion date of the schedule could be met. (Exs. 27-40.) It is undisputed that these deadlines were not met, and B&W Y-12 admits that it ignored these schedules when it planned the work. (Tr. 811-12 (Blair).) But B&W Y-12 argues that it was not necessary to open the pits at a faster rate because CMI was not ready to work in all of the excavations: “They didn’t have a crew to go to another pit. If they needed to be in a pit, they asked. . . . We did not open a pit, we did not excavate until we were requested to excavate.” (Tr. 812 (Blair).)

The court is persuaded that there were a number of instances when Ms. Blair’s statement was accurate, and the court will address several reasons for these delays below. But according to CMI, the reason why CMI did not have an extra crew (who could have gone into additional pits) was because B&W Y-12 refused to maintain the number of excavations that CMI had requested in its original plan. (Tr. 348-51 (Bowden); Exs. 410, 423.) CMI had planned to have two crews: one to work on disconnecting the pipe ahead of UGSI and another to test the liner and to reconnect the new liner and pipe. (Tr. 75-77 (Bowden).) The maximum number of pits that B&W Y-12 had open at one time was seven, a number that was substantially below the estimate CMI indicated was necessary to achieve the July 2, 2009, completion date. (Tr. 1049 (Barnett).) The court finds that the production line plan that CMI wanted to use was not possible with the limited number of excavations that were open at a given time.

Another problem with the limited number of excavations was that it reduced CMI's flexibility to continue work in other pits when it encountered a problem in one excavation. As work progressed, CMI and B&W Y-12 discovered a number of significant discrepancies from the site drawings that required changes to the work plan. Because of these differing site conditions, and due to a number of other problems that the court will discuss below, there were several of occasions when CMI needed to move its crew from one pit to another. These moves were frustrating to both parties. As Mr. Cox testified,

There were sometimes we would be sitting in our Wednesday meeting and [CMI] would say we are going to hole 14. I would go have everybody going that way and then they would say, no, we need to go in hole 10. I would have to jerk my men back and jump in it real quick.

(Tr. 993 (Cox).) If B&W Y-12 had kept more of the excavations open, CMI would have had greater flexibility to respond to the problems it encountered on the work site.

For the reasons discussed above, the court finds that B&W Y-12's failure to maintain more than seven excavations open at any given time was a significant factor that contributed to the Project's delay. The court finds that there were several occasions when CMI was waiting on B&W Y-12 to release an excavation. And while there were other occasions when CMI was not ready to work in a new pit, this fact alone does not justify B&W Y-12's reticence at opening additional excavations. If more pits had been available, CMI could have performed work in multiple locations, utilizing the double crew that it had originally planned and wielding greater flexibility to deal with site problems as they arose.

2. Inaccuracies in the Site Drawings

CMI claims that many of the delays resulted from conditions that CMI encountered on-

site that were different from the drawings that B&W Y-12 had provided. One of the most serious issues was the depth at which the existing pipe was located. When CMI bid for the job, the drawings that B&W Y-12 provided showed the depths of the existing pipe at approximately four to six feet. (Wells Dep. 15, Ex. 502.) But this estimate proved to be inaccurate. The first excavation ditch was seven to eight feet deep and the average depth of the pits turned out to be seven to twelve feet. (Id.) Mr. Wells brought this issue to B&W Y-12's attention from the beginning of the Project during the weekly meetings. The problem was that the difference in depth necessitated a whole new set of safety regulations for the protection of the workers. Instead of barricade tape, the pits now required ladders going into the ditches, steps, and handrails. (Id. at 16.) At that depth, hazardous fumes prevented CMI from using the gas-powered saws and other equipment that CMI had planned to utilize. (Id.) CMI had to find electric saws instead, which meant that CMI had to retrain its workers on the electric saw who had previously been trained on the gas-powered saws. (Id. at 17.) The greater depth also made the work more difficult. B&W Y-12 had to add shoring to the excavations, and the shoring took away room for CMI to work and made it more difficult to insert the liner. Finally, the increased depth changed the entry and exit angles into the pit, which made the liner insertion more problematic. (Id. at 15-16.) If the "tail ditch length," which was the slope at the entry and exit excavations, was too short, then the PVC liner could not bend enough to be inserted into the pipe. (Tr. 415-16 (Bowden).)

B&W Y-12 argues that CMI knew that the drawings on which it relied to make its bid were not entirely accurate and that B&W Y-12 could not provide an "exact burial depth" for the lines. (Tr. 417 (Bowden); Ex. 282.) The drawings stated that the "depths of potable water lines

. . . are approximate.” (Tr. 846-47 (Monleon); Ex. 15.) And since the Y-12 facility was hurriedly constructed during World War II, it is not surprising that the site drawings contained inaccuracies. Even CMI acknowledged that it was prepared for this fact, as it stated in its technical offer that “on a DOE/NNSA site the unexpected can be expected.” (Ex. 139, at 1613.) But the site drawings were not just off by a foot or two. Instead, many of the pipe sections were buried twice as deep as CMI had thought. CMI could not have reasonably assumed that the caveat that the drawings were “approximate” indicated such a drastic difference. And because CMI was not allowed to do any digging during the pre-bid walk-through, there was no way that CMI could have prepared for the discrepancy or accounted for these extra costs in its bid.

Another problem with the drawings was that they often did not include fittings or branch lines. These additional fittings and branch lines held up CMI’s work in several instances. For example, in Excavation No. 2, the liner got stuck due to a fitting that was not on the drawing. As a result, B&W Y-12 had to perform extra digging before CMI could continue working. (Wells Dep. 87, Ex. 502.) In Excavation No. 4, CMI found a bypass line and B&W Y-12 had to enlarge the pit considerably. (Id. at 21-22.) In Excavation No. 5, an abandoned pipe above the M6-01 pipe had to be removed by B&W Y-12 before CMI could start work. (Id. at 85.) There were also two fittings that CMI discovered in Excavation No. 5 that were not on the drawings. These extra fittings required a new pit, Excavation No. 4A. (Id. at 163-64.) In Excavation No. 6, there was a concrete pipe creating a safety hazard that had not been removed by B&W Y-12. (Id. at 79.) There was also a lead joint in that pit which was not shown on the drawings. CMI could not remove the lead joint for environmental and safety reasons, and it had to stop work until B&W Y-12 took this piece out. (Id. at 93-94, 97, 165-66.)

Both parties no doubt anticipated that some of these surprises would arise when CMI submitted its bid. But the court is struck by the sheer number of inaccuracies in depth, fittings, and branch lines that required additional or deeper excavations. As a result, the court finds that the site drawings were another significant cause of the Project's delay.

3. Dewatering

Under the Subcontract, B&W Y-12 maintained the responsibility to keep water out of the excavations. (Ex. 4, at 705; Tr. 41-42 (Bowden); Wells Dep. 26, Ex. 502.) In his deposition, Mr. Wells testified that CMI encountered dewatering issues in a number of pits, such as in Excavation No. 13, where there was a stream crossing. (Wells Dep. 157-58, Ex. 502.) But the biggest problem occurred in Excavation No. 11, where B&W Y-12 was pumping out water for weeks. (Id. at 26-27, 155-56.) This pit kept filling with water from an adjacent ditch that B&W Y-12 had dug. (Id.) As of September 18, 2009, the pit had been open for almost eight weeks, but CMI still could not complete its work there due to the water problem. (Id. at 25-29.) Even though Mr. Wells had told B&W Y-12 that it needed to install a sump, B&W Y-12 never addressed the problem with this approach. (Id. at 28-30.) Instead, B&W Y-12 would come in the morning and pump the water out. But after the B&W Y-12 laborer who had performed the pumping left, the ditch would start filling up again. (Id.) Mr. Wells stated that dewatering was an ongoing event in Excavation No. 11 and that there was a foot or two of water in the pit every morning. (Id.) The Daily Activity Reports that CMI created each day on the Project demonstrate that Excavation No. 11 had problems with excess water from July 20, 2009, to October 7, 2009. (Ex. 99.) From at least August 13, 2009, CMI noted that B&W Y-12 was going to install a sump area to address the concern, but it appears that the sump was never dug. (Id.)

CMI and UGSI could not perform their work in such wet conditions, as the muddy bottoms created a danger of electrocution from running electric tools. (Id. at 25-27, 30-31, 155-56.) The court finds that the dewatering issues that CMI encountered were another significant factor that contributed to the delay of the Project.

4. Excavation under the Pipe

The parties dispute a number of issues concerning the excavation clearance that was necessary underneath the pipe. In its initial submittals, the Response for Clarification No. 1, CMI provided B&W Y-12 with UGSI's excavation requirements, one of which was that it needed to have a "[r]ecommended depth" of twelve inches below the invert (the inside bottom) of the pipe. (Ex. 143, at 2.) Ms. Blair testified that the 12-inch requirement became "extremely painful" in the beginning of the Project because every excavation that B&W Y-12 prepared was "never good enough" for CMI. (Tr. 778-79 (Blair).) B&W Y-12 points out that on April 27, 28, and 29, CMI claimed delays which it attributed to the 12-inch requirement even though CMI was replacing the pipe in Excavation No. 1, not cleaning it. (See Ex. 372, at 2943.)

But CMI views these events differently. Mr. Wells testified that when he arrived at the Project site on April 20, 2009, Excavation No. 1 had not been completed. (Wells Dep. 12-13, Ex. 502.) And when B&W Y-12 turned over the pit to CMI, Mr. Wells stated that the excavation depth only went down to the middle of the pipe diameter so that the pipe was only partially uncovered. (Id.) CMI could not use a saw in the dirt and was unable to cut through the pipe without clearance underneath. Mr. Wells's testimony is reinforced by an email exchange between Ms. Wiseman and Mr. Bowden in early May 2009 in which Ms. Wiseman took the position that B&W Y-12 was not required to excavate under the pipe in areas where CMI would

be replacing the pipe instead of cleaning and lining it. (Ex. 299.) The court disagrees with Ms. Wiseman on this point. Given that any excavation work at the Y-12 site had to go through a permitting process that could take up to fifteen business days (see Ex. 143, at 2), B&W Y-12 should have provided CMI with advance warning if it was expecting CMI to excavate material. And under the Subcontract, it was B&W Y-12's responsibility to perform all necessary excavations. (Ex. 4, at 704.) It was reasonable for CMI to assume that B&W Y-12 would excavate the pits to a sufficient depth to allow CMI to cut through the pipe.

Ms. Blair testified to other instances when CMI would refuse to work even though the clearance was very close to the requirements: "I would get reports back from [Mr. Monleon] that we would be eleven and a half inches or eleven and three quarters inches beneath the pipe. [CMI] refused to work and called a delay." (Tr. 779 (Blair).) Eventually, Ms. Blair called CMI's owner, James Williams, and resolved the problem over the phone. (Id. at 780.) Mr. Williams agreed that the difference was petty and that CMI had laborers who could dig out the last little bit. B&W Y-12 "never had an issue after that phone call." (Id.) Mr. Wells did not mention any order from Mr. Williams about the problem, but did testify that, later in the Project, "it got to the point where . . . in order to keep the job moving, I had our laborer do some of the digging to kind of supplement and not have to wait on someone to come and do it." (Wells Dep. 14-15, Ex. 502.)

The court finds that B&W Y-12 was not responsible for any delays caused by excavations that it had dug to within an inch of the requirement. But the court also finds that, especially during the first few weeks of the Project, B&W Y-12 caused CMI a number of minor delays because it had not sufficiently excavated some of the pipes.

5. Valves and Gaskets

CMI argues that an issue with the specifications for a number of valves contributed to the Project delay. CMI's argument is separate from B&W Y-12's counterclaim that CMI is responsible for the cost of those valves (since these valves were eventually provided by B&W Y-12). The court will address B&W Y-12's argument below and here focuses on the question of whether the specification problem caused the Project to be extended.

The water lines that were part of the Project are not just potable water lines, but also feed the fire protection systems at Y-12. (Tr. 830-31 (Coppala); Tr. 856 (Monleon).) Accordingly, the water lines at Y-12 must meet minimum fire protection requirements. For this reason, the products provided by CMI for the water lines needed to be UL-listed, meaning the products needed to conform to Underwriters Laboratories specifications for fire protection. (Ex. 4, at 714.) The Construction Specifications called for a V-6403 butterfly valve to be used and listed the Milliken Model 510 Class 150 Mechanical Joint (Milliken valve) as a conforming valve. (*Id.* at 765.) But the Milliken valve was no longer available as a UL-listed valve. (Tr. 790 (Blair).) CMI raised the issue with B&W Y-12 in May 2009 and Ms. Blair suggested that CMI use conforming valves from other manufacturers which were UL-listed. (*Id.* at 824-25.) She saw no need to correct the specifications, as CMI demanded, because the Subcontract already allowed CMI to identify an alternative if that alternative met the Construction Specifications. (*Id.*) CMI found an alternate valve, but it had a long lead time before it could be delivered. (Tr. 287-88 (Bowden).) B&W Y-12 finally decided to supply UL-listed valves from its own stock, but did not give the valves to CMI until August 5, 2009. (Ex. 430, at 851.) Mr. Bowden testified that CMI was delayed because it could not complete the excavations that had been opened where the

butterfly valve was to be installed until that time. (Tr. 281-84 (Bowden).) He stated that this problem affected almost all of the open excavations. (Id. at 287-88.)

The court finds that B&W Y-12 was not required to change the specifications, since the General Terms and Conditions of the Subcontract allowed CMI to substitute equipment that was “equal to that specified.” (Ex. 2 ¶ 32.) But the General Terms and Conditions also required CMI to obtain B&W Y-12’s written approval before making this substitution. (Id.) Since B&W Y-12 provided CMI a specification for a valve that was no longer available, and since CMI had to obtain B&W Y-12’s written approval to substitute an adequate valve, the court finds that B&W Y-12 contributed to the Project’s delay by not providing the valves to CMI in a more timely fashion.

CMI argues that a similar issue arose with the gaskets that were required for a ductile pipe installation that was added in Change Order Notice No. 2. (Ex. 242; Tr. 280 (Bowden).) Gaskets were necessary to complete this work, and CMI asserts that B&W Y-12 did not include in its specifications the requirement that the gaskets be UL-listed. (Tr. 1057 (Bowden).) The court finds that it lacks sufficient information to determine whether the UL-listed specification was necessary or whether the lack of this specification contributed to the delay of the Project.

6. Burn Permits

CMI complained that one source of daily delays related to the burn permits, which were required every day that CMI needed to cut metal pipe with a saw or use a welding torch. CMI could not start its work until B&W Y-12 provided the burn permit. (Wells Dep. 35-36, Ex. 502.) Mr. Wells testified that while Mr. Monleon was the STR, it took at least thirty or forty minutes and sometimes up to two hours for Mr. Monleon to bring CMI the burn permit that it had

requested the day before. (Id.) In August, Mr. Monleon went to work on another project for B&W Y-12 and Joe Darden took over his position. After Mr. Darden became the STR, Mr. Wells stated that CMI did not even need to request a burn permit, as Mr. Darden would bring the permit to CMI between 7:00 and 7:30 a.m. (Id.)

7. Lack of an Equipment Operator

B&W Y-12 claims that for five days on June 15-18 and June 22, 2009, CMI was not able to continue work because its equipment operator, Carley Young, unexpectedly quit. (Ex. 97, at 1396-1400.) The court finds that CMI must bear the cost of its operator's sudden departure. But the court also finds that CMI was only responsible for four days' worth of delay, because an additional day of delay was caused when the first replacement that CMI hired was not allowed on the site. The Subcontract required the equipment operator to be from the local union. Following this requirement, CMI hired a replacement from the union, but on June 18, 2009, CMI's proposed operator was refused admittance to Y-12 because he was on the "Do Not Admit" list kept by B&W Y-12. (Id. at 1399.) A suitable operator arrived on site the following work day (June 22) and spent a day in training. B&W Y-12 had not informed CMI or the union that CMI's first choice was on the "Do Not Admit" list. While B&W Y-12 may have had legitimate security reasons for keeping this list confidential, the court finds that CMI had no way to know that its proposed operator would not be allowed to work. As result, the court finds that CMI is only responsible for forty hours of the delay caused by the lack of an equipment operator.

8. Liner Failure

On July 9, 2009, CMI and UGSI were expanding a liner in a section of pipe between Excavation No. 3 and 4 when the liner cracked. (Tr. 290 (Bowden); Ex. 347.) After studying the

problem, UGSI decided it needed to rent a boiler so it could heat up the PVC liner and remove it. The boiler arrived on July 29, 2009, and the liner was removed by August 4, 2009. CMI and UGSI debated the cause of the failure, but the court finds that it need not address this debate. Whether CMI or UGSI was to blame, CMI was responsible to B&W Y-12 under the Subcontract for the work being done properly. (Tr. 443 (Bowden).)

CMI maintains that the liner failure caused only four days of delay because CMI was able to make progress on other parts of the job during the time CMI was investigating what caused the crack in the liner. (Well Dep. 41, Ex. 502.) B&W Y-12 disagrees that the liner failure was such a minimal disturbance, and Ms. Blair testified that CMI “didn’t do anything for three weeks” after the liner cracked. (Tr. 772 (Blair).) The court agrees with CMI that the daily reports show that CMI was still working on other parts of the Project while it was determining a plan with UGSI to move forward on the failed liner. (See Exs. 97, 99-100.) But there were two days around July 9, 2009, and four days following July 29, 2009, when CMI was focused on the liner issue. CMI maintains that they could have moved forward on other parts of the Project if B&W Y-12 had released more excavations. Even if CMI’s argument is true, the court finds that CMI had to devote the majority of its resources to the failed liner issue for six days. Accordingly, the court finds that CMI is responsible for about sixty hours of delay due to the cracked liner.

9. Lack of an Environmental Safety and Health Representative

There were a number of days during the Project when CMI was unable to perform work on site because its Environmental Safety and Health (ES&H) Representative was not available. CMI argues that the delays caused by this absence would have been avoided if B&W Y-12 had approved Jessie Burch-Kennedy to this position.

During the submittal process, CMI requested that Ms. Burch-Kennedy be substituted as CMI's ES&H Representative.¹⁰ B&W Y-12 required that the ES&H Representative have thirteen years of field experience in safety. While Ms. Burch-Kennedy had never worked as a safety representative before, she did have experience as an STR. "The STR [position] involves safety. [Ms. Burch-Kennedy] is very safety conscious." (Tr. 104 (Bowden).) CMI argues that the specifications for the position do not require an applicant to have thirteen years of experience in which safety is the applicant's sole responsibility. But B&W Y-12 found that "[a]lthough [Ms. Burch-Kennedy] has taken a numerous number of safety related training [sic], she has no hands-on experience as a safety representative, nor formal safety education." (Tr. 105 (Bowden); Ex. 198.) B&W Y-12 also informed CMI that Ms. Burch-Kennedy's resume did "not reflect Safety Oversight as a primary responsibility." (Ex. 427.¹¹) The court finds that it was within B&W Y-12's discretion to require CMI to supply a different applicant as its ES&H Representative.

As a result, the court is not persuaded by CMI's argument that the delays caused by the absence of the ES&H Representative would have been avoided if Ms. Burch-Kennedy had been appointed. CMI was required to have its ES&H Representative on site and is responsible for any delays that occurred when its representative was not present.

According to B&W Y-12's Daily Reports (Ex. 97) and its delay analysis (Ex. 486), CMI did not have an ES&H Representative at the Project at all on April 20, April 23, May 27,

¹⁰Ms. Burch-Kennedy was not originally listed as key personnel in CMI's bid. (Tr. 102 (Bowden); Ex. 166.)

¹¹As noted above, Trial Exhibit 427 does not include page numbers. The correct page may be found by searching for the Transmittal Date in the upper right-hand corner: 2/4/2009.

September 28, and October 20. Additionally, B&W Y-12 claims that the representative was off site for at least part of the day on May 21 (one hour), May 28 (3.5 hours), June 2 (7.5 hours), and August 31 (3.5 hours). (Id.) The court finds these numbers slightly exaggerate the delay caused by the absence of the safety officer because CMI was still able to accomplish work on several days when its safety officer was not present. The court estimates that the various absences of the ES&H Representative caused about fifty hours of delay over the course of the Project.

B. Allocation of Responsibility for the Delay

The court now determines the amount of delay that was caused by each party. The court relies on its findings discussed above, as well as a number of materials provided to the court that describe the daily activities and delays that occurred during the Project. CMI has submitted its delay logs (Ex. 98), its Daily Activity Reports (Ex. 99), and a set of daily emails that Mr. Wells wrote to Mr. Williams, Ms. Burch-Kennedy, and Mr. Bowden while Mr. Wells was on site (Ex. 100). B&W Y-12 has submitted its own Daily Reports, which were prepared by the STR (first Mr. Monleon, then Mr. Darden). (Ex. 97.) B&W Y-12 has also provided a summary of the delays that it believes were caused by CMI. (Ex. 486.) The court has carefully considered all of these materials, as well as the testimony of the parties submitted in depositions and at trial.

The court has not attempted to parse the question of responsibility on a day-by-day basis. The materials submitted to the court, not surprisingly, tend to portray the party who submitted those materials in the best light, and many of the reports suggest conflicting, and sometimes overlapping, reasons for the delay on any given day. More importantly, an attempt to settle each of these individual disputes misses the larger picture. Many of the factors that the court has found contributed to the delay, such as B&W Y-12's inability to maintain more than seven pits

open at a given time, are not well represented in the daily reports. These factors contributed to a structural delay, derailing the course of the Project from the schedule that was submitted by CMI on April 15, 2009. It is difficult to surmise how the work would have progressed differently in response to the delays cited by the parties in their reports if B&W Y-12 had maintained more open pits and CMI had used the double work force it originally contemplated. In addition, it is difficult to determine which delays were actually responsible for the extension of the Project. As CMI has noted, not all activities were on the critical path of the Project. So, for example, a recorded delay of five hours that resulted because a safety manager was off site or because an excavation was not deep enough may not have moved out the end date of the Project if there was other ongoing work that the parties could perform elsewhere on site.

But a number of patterns do emerge from the daily reports that allow the court to describe the general path of construction. The first week of the Project (April 20) got off to a rough start. CMI's ES&H Representative was in training one day and off site another. The week was not completely lost, as CMI was able to complete some of the contractually required training activities. Work activities during the second week (April 27) were delayed when CMI switched from a gas-powered to an electric saw. The court has found above that B&W Y-12 must bear the costs of this delay since it resulted from the increased depth of the excavations, which was not shown accurately on the site drawings. CMI also experienced delays this week because B&W Y-12 had not uncovered the entire pipe during its excavations.

The third week (May 4) appears to have been uneventful, although CMI was delayed one day while it waited for B&W Y-12 to dewater one excavation and install steps in another. The next two weeks involved further delays from dewatering and the need to excavate extra pits due

to offsets that were not in the site drawings. There was also a liner problem in Excavation No. 2 caused by a fitting in the pipe. The dewatering and excavation problems continued the sixth week (May 25), although for one-and-a-half days no work could be done because CMI's ES&H Representative was off site. The ES&H Representative was also off site on one day during the seventh week. The eighth week (June 8) appears to have been uneventful, but work was delayed throughout the ninth week (June 15) and into the tenth week due to the lack of an equipment operator. The court has found that CMI must bear the cost of its operator's unexpected departure, but that B&W Y-12 must bear the cost of the delays that resulted when CMI's new operator was denied access to the site because he was on the "Do Not Admit" list, a list which had not been disclosed to CMI.

The eleventh week (June 22) was uneventful, but as of the twelfth week (June 29), CMI was delayed as it waited for B&W Y-12 to turn over new excavations. These delays continued throughout the thirteenth week (July 6). At the end of this week, on July 9, the liner cracked. As discussed above, the liner failure caused approximately six days of delay—on July 9, 13, 29 and 30 and August 3 and 4. CMI bears responsibility for this delay. But while the liner issue was being resolved, CMI also encountered delays due to B&W Y-12's failure to find a suitable pump to remove water from Excavation No. 11. The remainder of the Project went much more smoothly, although no work was performed on September 28 because there was no ES&H Representative on site.¹²

In addition to the delays discussed above, CMI faced delays from the lack of additional

¹²B&W Y-12 asserts that there was no ES&H Representative on site on August 31 and October 20, but it appears that CMI was still able to perform work those days.

excavations open at any given time, inadequate excavations, the issue with the valves, and the lag time receiving a burn permit at the start of the day.

According to the general history of the Project that the court has traced above, the majority of delays were due to problems with the excavations. Too few excavations were open at any one time, and many of the excavations were inadequate because they required additional safety features, more clearance under the pipes, and dewatering. Many of these issues arose because it was a rainy summer and the site drawings were riddled with inaccuracies. Nevertheless, it was B&W Y-12's responsibility to open and maintain the excavations, and the court finds that the majority of delays occurred because of B&W Y-12's failure to do so.

But not all of the delays can be attributed to B&W Y-12. The court has found that CMI was responsible for any delays caused by the liner failure, the unexpected departure of the equipment operator, and any days when work was stopped because of the absence of the ES&H Representative. The court has added up the lost hours that B&W Y-12 asserts were attributable to CMI for these three reasons. (See Ex. 426.¹³) Using this estimate, CMI was responsible for 150 hours¹⁴ of delay over the course of the Project. The entire Project was delayed by 63 days, or

¹³The court has added together the hours that B&W Y-12 claims were lost for the following dates: April 20 and 23; May 21, 27, and 28; June 2, 15, 16, 17, and 22; July 9, 13, 29, and 30; August 3, 4, and 31; September 9; and October 20. While the court has excluded a few days that could arguably be added to this calculation, the court notes that a few of the days it has counted are somewhat over-inclusive in the number of hours that B&W Y-12 claims were lost since it appears from the reports that CMI was still performing some work those days. The court has taken care to balance these errors in its estimate.

¹⁴The court also arrives at the figure of 150 hours of delay by adding the approximate delays that the court determined above: forty hours from the lack of an equipment operator; sixty hours from the cracked liner; and fifty hours from the absence of an ES&H Representative. The court estimates that more hours of delay were caused by the cracked liner than B&W Y-12 claims for July 9, 13, 29, and 30 and August 3 and 4, which is reasonable because B&W Y-12's

630 hours, since the end date was pushed out from July 2 to October 21 and the parties worked four ten-hour days each week. According to these figures, approximately 25% of the delay resulted from CMI's activities. This percentage corroborates the court's finding that B&W Y-12 was responsible for the majority of the delays. It also represents the court's best estimate of the relative fault of the parties for the extension of the Project's end date.

As a result, on the basis of all the daily reports, testimony, and other evidence that the court has considered, the court finds that B&W Y-12 caused 75% of the Project delays between April 20, 2009, and October 21, 2009. CMI was responsible for 25% of these delays.

IV. Relations Once Work Had Begun: B&W Y-12's Counterclaim

B&W Y-12 has asserted a number of counterclaims against CMI, mostly seeking reimbursement for a number of costs that B&W Y-12 argues resulted from delays caused by CMI. Before analyzing B&W Y-12's specific claims, the court considers a number of factual findings that relate to two general arguments made by CMI about whether B&W Y-12 can recover for any counterclaim.

A. Lack of Notice

CMI argues that it did not receive notice during the course of the Project that B&W Y-12 would later seek to charge CMI for the costs in its counterclaims. Both Mr. Bowden and Mr. Williams testified to the lack of notice. (Tr. 214-17 (Bowden); Tr. 526-27 (Williams).) The

calculations for these days do not appear to reflect the time that CMI spent figuring out a solution with UGSI. In contrast, the court estimates that somewhat fewer hours of delay were caused by the absence of an ES&H Representative, which is also reasonable since B&W Y-12's calculations for April 20 and 23, May 21, 27, and 28, June 2, August 13, September 28, and October 20 do not reflect that CMI was still able to accomplish some work on a few of these days.

court agrees that B&W Y-12 did not give CMI any formal notice of its counterclaims. The court will analyze whether informal notice was given for each specific claim below. In its Conclusions of Law, the court will also decide whether any notice, whether formal or informal, was required.

B. Reimbursement of Costs by the NNSA

CMI asserts that B&W Y-12 cannot recover on its counterclaims because it has already been reimbursed for its expenses by the NNSA. As the court discussed above, B&W Y-12 has a management and operating (M&O) contract with the NNSA. At the trial, the court heard testimony from Jill Albaugh, the NNSA Contracting Officer. She is the government representative who awards, administers, and terminates contracts. One of her duties is to make sure that B&W Y-12 performs its operating activities in accordance with the terms and conditions of the M&O contract. (Tr. 753-54 (Albaugh).)

Ms. Albaugh testified that the costs that B&W Y-12 is seeking to recover from CMI in this matter have already been paid from DOE funds. (Id. at 762.) B&W Y-12's Construction Manager, Don Hayes, agreed that all of the costs and charges that B&W Y-12 seeks for the water trucks, the shoring boxes, the labor, and the management were paid with DOE funds. (Hayes Dep. 156-57, Dkt. No. 97.)

The court also heard testimony from Willie Wilson, B&W Y-12's Prime Contract Manager, who has responsibility for the administration of the M&O contract between B&W Y-12 and the NNSA. Mr. Wilson testified that if B&W Y-12 were to recover any amount from CMI in this action, B&W Y-12 would be required to refund that amount to the DOE. (Tr. 1018-21 (Wilson).) In addition, he stated that he could not conceive of a way in which B&W Y-12 would be able to pocket any money it recovered from a subcontractor. (Id. at 1015.) Ms.

Albaugh agreed that any amounts recovered by B&W Y-12 on its counterclaim would belong to the United States. (Tr. 756 (Albaugh).) She did state that it might be possible for B&W Y-12 to keep the money, but only if it were reused on a limited basis for an allowable cost within the scope of the M&O contract. (Id. at 758-61.) The decision about whether the money could be allocated for an allowable cost is guided by the DOE Accounting Handbook. (Id.) If the money could not be reused, “it could go back as a credit basically under the DOE account to the Treasury.” (Id.) Ms. Albaugh also testified that she had actually seen “checks written to the Treasury in a case where [the prime contractors had] gotten money back from the subcontractor.” (Id. at 757-58.)

Given this testimony, the court is satisfied that B&W Y-12 will not receive a double recovery if it were to recover money from CMI. The money would instead be credited back to the DOE. As Ms. Albaugh testified, the DOE is clearly aware that B&W Y-12 has made counterclaims against CMI in this case. Even if the DOE has not yet made a formal demand for any recovery from this lawsuit, the agency is no doubt paying attention to the resolution of this matter and will expect a credit if there is one.

CMI additionally argues that the DOE never assigned its rights to B&W Y-12 to pursue claims on its behalf. The court will analyze this legal argument in its Conclusions of Law. Here, the court finds that, as a factual matter, B&W Y-12 did not produce any written authorization from Ms. Albaugh allowing B&W Y-12 to sue CMI for the costs in its counterclaims. (See id. at 763.)

C. Specific Counterclaims

B&W Y-12 claims that CMI must refund B&W Y-12 for a number of costs that occurred

during the course of the Project. These costs include water truck rentals, additional shoring box rentals, valves, and the extra labor costs that occurred due to the Project's extension. During Mr. Hayes's deposition, B&W Y-12 stated that it was no longer claiming some of these expenses. As a result, the court will not consider a charge of \$38,304 for labor costs to support the water trucks. (Hayes Dep. 31, Dkt. No. 97.) Additionally, B&W Y-12 is no longer requesting any non-manual labor costs for the period from July 2, 2009, to October 21, 2009, other than the expenses for three employees: Robert Monleon, Joe Darden, and Kenny Cox. (Id. at 45-47.)

1. Water Trucks

B&W Y-12 seeks \$19,340 for the cost of renting water trucks during the Project. These water trucks were required because some of the water hydrants that were on site were out of service due to the construction. (Id. at 29.) Mr. Hayes testified that, originally, water was going to be available from the hydrants. (Id. at 28.) But he also testified that, during a walk-through with B&W Y-12 and CMI personnel that occurred in early May 2009, CMI was aware that some of the hydrants would not be in service for use during the Project. (Id. at 28-29.) And Mr. Monleon asserted that, even though some of the hydrants were not in use, other hydrants were available at a distance of two or three hundred feet. (Tr. 940 (Monleon).)

The Supplemental Conditions required CMI to "provide portable water holding tanks with discharge pumps or mobile water tanker where [B&W Y-12] does not provide a water source convenient to [CMI's] work area." (Ex. 6, at 1821.) But CMI points out that the Project conditions were modified by Clarification No. 1, which included a requirement that B&W Y-12 provide a potable water source within one hundred feet of the line. (Ex. 143, at 4.) The hundred feet specification was a requirement that UGSI requested. (Tr. 409-10 (Bowden).) And while

CMI never asked UGSI why it needed a hydrant within one hundred feet, the court finds that this requirement was still incorporated into the Subcontract when B&W Y-12 accepted CMI's offer.

When the parties were on the job site, they argued about who was required to provide water. Ms. Blair testified that these arguments stretched over two weeks and included discussions in team meetings about who was responsible for the water under the Supplemental Conditions. (Tr. 745 (Blair).) Eventually, Ms. Blair "got tired of arguing over contract documents. We weren't moving anywhere. They needed the water. I got the truck." (*Id.*; Ex. 286.) She stated that no one was surprised when the water truck arrived. (Tr. 745-47, 815 (Blair); Ex. 286.) While the court finds that CMI was aware that the costs for these trucks was disputed, the parties agree that B&W Y-12 never sent CMI a formal notice of a backcharge for the water trucks. But, in mid-August, B&W Y-12 did send CMI an email that included a note in a table suggesting that B&W Y-12 might charge CMI for the water truck rentals. (Tr. 689 (Wiseman); Ex. 372, at 2942, 2953.) The court finds that this warning, issued after the trucks had been rented, was insufficient to provide CMI with notice that it might bear responsibility for these costs.

2. Shoring Boxes

B&W Y-12 seeks reimbursement for the cost of renting additional shoring boxes during the Project. B&W Y-12 originally asked for \$350,000 to cover this cost, basing its position on the argument that it only agreed to open three excavations at one time. This assertion is not persuasive since the court has already found that, based on the information exchanged between the parties, it was reasonable for CMI to estimate that up to twenty-one pits would need to be open at one time to complete the Project by July 2, 2009. But at trial, B&W Y-12 chose to

pursue a different argument and claimed that it was owed \$148,612 for the costs of the shoring boxes. To calculate this amount, B&W Y-12 compared the number of days that each excavation was to be open according to the revised schedule of April 15, 2009, with the number of days that each excavation was actually open.¹⁵

CMI disputes B&W Y-12's calculation for a number of reasons. First, CMI asserts that B&W Y-12 had a contractual duty to provide shoring boxes. The court agrees with CMI that B&W Y-12 did not present any evidence at trial to show that it was CMI who bore this responsibility. Second, CMI claims that B&W Y-12 did not take into account the number of additional boxes that were required due to differences in site conditions. As the court has discussed above, the pipes in the Project were rarely located at a depth of four to five feet as listed in the site drawings. Mr. Hayes testified that shoring boxes had to be stacked at several locations where the excavation was greater than ten feet. (Hayes Dep. 97, Dkt. No. 97.) Finally, CMI argues that B&W Y-12 failed to give CMI notice of a backcharge regarding the shoring boxes. (Tr. 638 (Wiseman).) The court agrees that CMI was never given notice that B&W Y-12 planned to charge it for the additional costs of renting shoring boxes. The court will discuss whether B&W Y-12 was required to provide notice of a backcharge in its Conclusions of Law.

3. Valves

B&W Y-12 seeks to recover \$5,400 from CMI for six valves that B&W Y-12 provided to CMI. As discussed above, the valve dispute centered on the need to insure that the water lines met fire protection standards. The Milliken valve listed in the Construction Specifications was

¹⁵B&W Y-12 did not include in its calculation any excavations that were later descope. It calculated the end date of the excavation as the day when CMI conducted the final hydro test on the water line. (See Hayes Dep. 26, Dkt. No. 97.)

not available as a UL-listed valve, which was required to meet these standards. (Tr. 790 (Blair); Tr. 285-86 (Bowden).) As a result, B&W Y-12 ultimately provided CMI with adequate valves and now seeks to recover those costs. CMI admitted that it is responsible for paying for the valves. (Tr. 462 (Bowden).)

4. Extended Labor and Management Costs

B&W Y-12 seeks to recover a number of costs that it asserts were caused by CMI's performance on the site. First, B&W Y-12 stated in the Pretrial Order that it was asking for \$175,000 to cover the costs of having B&W Y-12 employees perform work that was within CMI's scope of work. (Pretrial Order, at 47, Dkt. No. 81.) B&W Y-12 asserts that CMI failed to accomplish this work itself due to a lack of tools and equipment. But the testimony at trial did not establish any work that CMI failed to perform and it did not show that CMI failed to provide required tools or equipment. On the contrary, Mr. Wells testified that he was not aware of any tools or equipment that B&W Y-12 had provided to CMI. (Wells Dep. 48, Ex. 502.) It appears that B&W Y-12 has dropped this argument in its Proposed Findings of Fact and Conclusions of Law, as it no longer cites the \$175,000 figure. (See B&W Y-12's Proposed Findings of Fact and Conclusions of Law, at 107, Dkt. No. 98.)

Instead, B&W Y-12 argues that CMI caused the Project to be delayed and, consequently, that B&W Y-12 spent an additional \$98,294 in manual (craft) labor costs and \$72,742.32 for the extra hours worked by three management employees (Mr. Monleon, Mr. Darden, and Mr. Cox) in support of CMI's activities. The court disagrees with these figures because it has already found that B&W Y-12 was primarily responsible for the Project delays. In its Conclusions of Law, the court will discuss how B&W Y-12's contribution to the delays reduces the amount it

can recover from CMI for any delay costs.

CMI asserts several additional reasons why it should not be required to pay B&W Y-12 these costs. First, CMI disputes the \$98,294 in craft labor costs because the evidence that B&W Y-12 offered in support of its claim is a tally of excavation labor from July 6, 2009, to September 30, 2009. The court agrees with CMI that these “additional excavation labor” costs are not recoverable. The Subcontract required B&W Y-12 to excavate at each pit location before CMI could perform its work. B&W Y-12’s duties included installing shoring, maintaining that shoring, dewatering, and backfilling the pits. (Ex. 4, at 704.) Whether B&W Y-12 excavated the pits for the M6-01 line before or after July 2, 2009, B&W Y-12 was still required to provide the excavation labor. As the court held in its discussion of whether B&W Y-12 was required to rent additional shoring boxes, B&W Y-12 has not demonstrated its baseline costs that would have resulted if B&W Y-12 had followed the excavation schedule that CMI proposed. The court finds that the majority of excavation costs were related to the number of pits that the Project required and were not time-dependent on the duration of the Project. As a result, B&W Y-12 was contractually responsible for these costs and cannot recover them. To the extent that some of the excavation labor was time-dependent, such as the labor needed to maintain the shoring and dewater the pits, the court finds that B&W Y-12 has not segregated these costs.

The evidence provided by B&W Y-12 also fails to subtract the costs for excavation labor during this time period for sections of the pipe that were removed from CMI’s scope and replaced by B&W Y-12 instead. Finally, not all delays are created equal, as only some delays affected the critical path of the Project. While any analysis of this critical path conducted after the fact is inherently subject to some bias, B&W Y-12 has not attempted to show the court any

analysis of whether CMI's alleged delays actually caused the Project to be extended. For all these reasons, the court declines to award B&W Y-12 any damages for additional craft labor hours.

CMI also disputes the recovery B&W Y-12 seeks for additional management hours. B&W Y-12 used the following method to calculate these costs. First, Lester Barnett, who is a Construction Project Controls employee of B&W Y-12, measured the number of delay hours that could be attributed to CMI and found that CMI had caused the Project to be extended for 283 hours. (Ex. 486.) He then multiplied that number by \$101.88, which represents the hourly rate for B&W Y-12's management personnel. (See Hayes Dep. 83, Dkt. No. 97; Ex. 485.) Finally, Mr. Barnett multiplied this number by three to account for the extra work of three management personnel: Mr. Monleon, Mr. Darden, and Mr. Cox. In its Proposed Findings of Fact and Conclusions of Law, B&W Y-12 requests the court to award \$72,742.32 for these costs. The court assumes that this amount is a scrivener's error, as B&W Y-12 first cited 283 delay hours in one paragraph but then cited 238 delay hours in the next paragraph. (B&W Y-12's Proposed Findings of Fact and Conclusions of Law ¶¶ 200, 201, Dkt. No. 98.) Multiplying 283, rather than 238, by the hourly rate for the three management personnel results in a damages request of \$86,496.12. This figure is approximately equal to the \$86,627.24 figure that results from directly adding the dollar amounts included in Trial Exhibit 485, which lists the work hours and corresponding costs for Mr. Monleon, Mr. Darden, and Mr. Cox for the period of July 6, 2009, through October 31, 2009.

The distinctions between these figures are not important because the court has found that CMI was not responsible for 283 hours of delay. Instead, the court has found that B&W Y-12

was responsible for delays caused by the additional excavation depth, the smaller number of pits that were open at one time, and problems in excavating and dewatering the pits. As discussed above, the court calculates that CMI was responsible for 150 hours of delay. These delays were due to the problems with the failed liner and a number of days when CMI did not have a proper ES&H Representative or equipment operator on site.

CMI argues that B&W Y-12 overstates its damages for two other reasons as well. First, Mr. Hayes admitted that Mr. Cox was supervising a number of activities in addition to CMI's work on the Project. These activities included his supervision of direct hires that were working on B&W Y-12's excavation and replacement of pipe sections that were no longer within CMI's scope. More importantly, Mr. Cox's supervision of CMI included supervision of such activities as excavating the pits, maintaining the shoring, and dewatering the pits. As the court has found in its discussion of B&W Y-12's craft labor costs, these activities were B&W Y-12's responsibility and were necessary whether the work occurred before or after July 2, 2009. The court recognizes that Mr. Cox may have put in some extra hours dewatering the pits and maintaining the shoring because of CMI's issues with the line, its equipment operator, and its ES&H Representative. But B&W Y-12 has not segregated these costs and has not cited specific instances in which Mr. Cox had to supervise an extra dewatering, for example, because of the liner delays. As a result, the court finds that B&W Y-12 has not demonstrated that it incurred any additional costs for Mr. Cox due to delays for which CMI was responsible.

Second, CMI asserts that Mr. Monleon was only the STR for the Project until August 5, 2009, and that B&W Y-12 should not be allowed any costs for Mr. Monleon's time after that date. Mr. Monleon testified that he went to work on another project for B&W Y-12 after he was

no longer the STR for the Project with CMI. (Tr. 938 (Monleon).) And Mr. Darden's Daily Reports show that Mr. Darden was working at the Project every day after Mr. Monleon left. (See Ex. 97.) The court agrees with CMI that the evidence presented at trial shows that B&W Y-12 only had one STR on the Project at a time. As a result, B&W Y-12 may not recover for Mr. Monleon's costs after he left the Project.

CONCLUSIONS OF LAW

I. Choice of Law

The General Terms and Conditions that were incorporated into the Subcontract include a choice of law provision in Section 27(g). (Ex. 2.) Under this provision, the parties agree that any substantive issues related to clauses or portions of clauses that are substantially identical to the Federal Acquisition Regulation (FAR), Department of Energy Acquisition Regulation (DEAR), or General Services Administration (GSA) clauses are to be determined in accordance with federal law as interpreted by the United States Court of Appeals for the Federal Circuit, the United States Court of Federal Claims, and the Board of Contract Appeals. All other substantive issues are to be determined under Tennessee law.

II. Claim for Modification No. 1

A. Method for Calculating the Equitable Adjustment

The central issue that the parties dispute concerning Modification No. 1 is the proper method for calculating the reduced Subcontract price after four of the five water lines were removed from the scope of the Project. B&W Y-12 argues that determining the appropriate pricing for a deductive change is a three-step process:

1. Reduce the Subcontract price by the agreed-upon unit prices for the four

- water lines that were descope.
2. Add any costs incurred by CMI for work performed on those four water lines before they were deleted from the Project.
 3. Add any additional costs in performing the continued work that were caused by the deductive change.

B&W Y-12 points to a number of provisions in the Subcontract to support its position.

For instance, the Subcontract describes the unit rates for the line items in the Project as follows:

The fixed unit rates are firm, all-inclusive, unit rates. Payment of the unit rate shall constitute full compensation for performance of the corresponding work and shall cover all costs of whatever nature incurred by [CMI] in accomplishing the work in accordance with the provisions of the subcontract.

(Ex. 1 ¶ E.4.) The Subcontract also states that

[CMI] understands and agrees that this work may or may not be authorized, and that neither [B&W Y-12] nor the U.S. Government warrants that any or all of the work will be authorized. [CMI] further understands and agrees to perform any portion of each item of authorized work at the stated unit or lump sum price, which shall constitute full payment for authorized work.

(Ex. 1 ¶ E.3.2.) Finally, B&W Y-12 argues that the Subcontract explicitly warned CMI that CMI might not be authorized to perform all the work described in the Task Release:

[B&W Y-12] makes no representation relative to the quantities that may be procured under this subcontract, nor is there any obligation or commitment on the part of [B&W Y-12] to authorize any items under this subcontract. Funding will be authorized and obligated on a subcontract or subcontract modification basis only.

(Ex. 1 ¶ B.1.)

Based on these Subcontract provisions, B&W Y-12 asserts that CMI should receive the fixed unit price (\$1,506,582.16) that CMI submitted in its bid for the M6-01 pipe, which was the only work on the Project that CMI performed, plus any costs caused by Modification No. 1 and any costs from the other four lines that CMI had already incurred before Modification No. 1 was

issued. As authority for its position, B&W Y-12 cites a case from the Postal Service Board of Contract Appeals in which this method was used to calculate the appropriate contract price reduction when three of four line items were deleted from a contract to install fire alarms and smoke detectors. Eugene Iovine, Inc., 92-2 B.C.A. (CCH) ¶ 25,013, 1991 PBSCA Lexis 17 (April 13, 1992). The contract in Eugene Iovine required separate unit pricing, which B&W Y-12 argues is also true of the Subcontract between B&W Y-12 and CMI.

But the court in Eugene Iovine found it dispositive that the four fire alarm systems in the contract's four line items were distinct from each other. "The solicitation which led to this contract made it clear that the items were independent of each other and could be awarded to different bidders. The overall contract was clearly not intended to be a lump sum contract." Id. at *8. Moreover, the court found that "the price for each item was to cover the costs associated with that item alone." Here, it is not clear that the situation is as similar as B&W Y-12 maintains. The Subcontract with CMI contains language that suggests the Subcontract was awarded on a lump-sum basis: "This subcontract is fully funded. The total price required for performance of this subcontract shall not to [sic] exceed \$2,471,572.04."

More importantly, the Solicitation incorporated the terms of the BOA. The BOA provided that "Work or Services specified in the BOA documents which are not described herein as a specific pay item in a Solicitation or [Task Release] shall be distributed within the given pay items at [CMI's] discretion, and will not be paid for separately." (Ex. 3, at 12.) The court has found above that CMI distributed its key personnel, labor, and management costs among the five proposed water line sections in order to avoid an unbalanced bid. This distribution occurred according to the BOA and was required since the Solicitation did not provide a separate line item

for expenses like management costs. As a result, the language that B&W Y-12 cites from Section E of the Subcontract about the fixed unit prices is in tension with the language from the BOA that allowed CMI to distribute costs for its management personnel and other expenses. The BOA provides that, “[i]n the event of a conflict between the BOA provisions and the provisions of any subsequent [Task Release], the provisions of the BOA will prevail.” (Ex. 3, at 5.)

The fixed unit price language also conflicts with the course of dealing between the two parties. B&W Y-12 was aware that CMI had distributed its management and other costs, since CMI had provided B&W Y-12 with a breakdown that demonstrated this distribution among the bid items in October 2008. (Ex. 140.) In its response to CMI’s REA for Modification No. 1, B&W Y-12 allowed CMI to recover \$151,962.02, but has never stated how it calculated that amount. (B&W Y-12’s Proposed Findings of Fact and Conclusions of Law, Dkt. No. 98, at 34-35.) And B&W Y-12 admitted during its testimony that, above the \$151,962.02 amount, CMI was entitled to recover some additional management costs. (Tr. 680 (Wiseman).) B&W Y-12’s admission implies that B&W Y-12 agreed that the deleted line items included at least some of these management costs.

Given the language of the BOA and B&W Y-12’s failure to object to CMI’s cost distribution, the court is not persuaded that the price reduction method described in Eugene Iovine is applicable here. B&W Y-12’s proposed three-step approach would not be equitable unless the costs to be added back into the contract price in the third step included the management, equipment, and labor costs that CMI had distributed among the line items that were deleted. Neither party has provided the court with this calculation.

Instead, CMI argues that an alternative approach is required by the General Terms and

Conditions (Ex. 2), which is one of the documents that was incorporated into the Subcontract.

The two key provisions provide as follows:

45. CHANGES. (a) [B&W Y-12] may at any time, by written order, and without notice to the sureties, if any, make changes within the general scope of this Agreement

(b) If any such change causes a difference to the cost, or the time required for performance, [B&W Y-12] shall make an equitable adjustment in the price, delivery/performance schedule, or both, and modify the Agreement

49. EQUITABLE ADJUSTMENTS.

. . .

(e) Equitable adjustments for deleted work shall include credits, limited to the same restrictions for overhead, profit, and commission in paragraphs (c) and (d) of this clause.

(f) On proposals covering both increases and decreases in price, the overhead, profit, and commission shall be applied to the net change in direct costs for [CMI] or the subcontractor performing the work.

(Ex. 2. ¶¶ 45, 49.)

The court agrees with CMI that under Section 45 of the General Terms and Conditions, B&W Y-12 must make an equitable adjustment to the price of the Subcontract if it issues a change that causes a difference to the cost or the time required for the performance. Modification No. 1 required B&W Y-12 to make such an equitable adjustment since Modification No. 1 changed the scope of work for the Project. B&W Y-12 was also required to make an equitable adjustment when it extended the time of the Project until July 2, 2009. While this change was formalized as part of Modification No. 2, the parties refer to the extension as a result of Modification No. 1, and CMI included its claim for costs that were incurred by the new Project end date in its REA for Modification No. 1. Accordingly, the court will not distinguish between Modification Nos. 1 and 2, but holds that both the change in scope and the change in

duration of the Project were modifications to the Subcontract that required an equitable adjustment under Modification No. 1.

Section 49 of the General Terms and Conditions supports the method that CMI used to calculate the change to the Subcontract price. According to this Section, the equitable adjustment should include credits to B&W Y-12 for work that was deleted from CMI's scope. CMI performed this calculation by subtracting from the original Subcontract price a credit for all of the manual labor and materials that were associated with the four deleted water lines. To this amount, CMI added back costs for its subcontractor (UGSI), extended management costs, and an increase in the Construction Labor Agreement (CLA) rates. CMI has calculated these amounts as follows:

Credits for deleted lines	-\$591,492.74
UGSI's costs incurred in connection with the deleted lines	\$101,422.15
Extended management costs	\$40,987.61
Increase in the CLA rates	\$2,928.42
Total of above items ¹⁶	-\$446,154.56

(Exs. 445-52.)

The court agrees that CMI's approach is consistent with the Subcontract and its incorporated documents but disagrees with some of the figures. Below, the court will analyze specific aspects of CMI's pricing of the equitable adjustment for Modification No. 1.

¹⁶While Trial Exhibit 445 lists this amount as \$446,154.54, the court is not concerned about the minor discrepancy. In any event, CMI uses the amount of \$446,154.56 to calculate its damages in Trial Exhibit 452.

B. Use of the BOA Rates

In order to price the credits to B&W Y-12 for labor and material that was no longer needed for the descope work, CMI used the rates that the parties agreed to in the BOA. The BOA rates result in a greater credit to B&W Y-12 in this situation since the BOA rates are “all-inclusive, fully burdened and include all markups for . . . Profit, Home Office Support, Training, etc.” (Ex. 3, at 10.) B&W Y-12 does not dispute the credit that CMI calculated for these items. Accordingly, the court holds that CMI correctly calculated the price of credits that it owed B&W Y-12 for the deleted water lines to be \$591,492.74.

B&W Y-12 does dispute the use of the BOA rates for adjustments that increase the price of the Subcontract, such as those caused by the extension of the end date, since the BOA rates result in a greater award to CMI in this situation.

The alternative to using BOA rates to calculate Subcontract price changes is to use direct costs, with allowances for overhead and profit. There is some support for this method in Section 49, which states that “overhead, profit, and commission shall be applied to the net change in direct costs” for CMI. (Ex. 2 ¶ 49(f).) Another provision in Section 49 requires CMI to provide “an itemized breakdown of increases and decreases in direct cost” in its proposal for an equitable adjustment. (Ex. 2 ¶ 49(b).) But despite this language in Section 49, a number of other reasons demonstrate that the BOA rates should be used to calculate both decreases and increases to the Subcontract price.

First, the Subcontract incorporates the provisions of the BOA and states that “in the event of a conflict between BOA provisions and the provisions of this subcontract, the provisions of the BOA will prevail.” (Ex. 1 ¶ G.1.) The BOA provisions include rates for management, labor,

and materials. (Ex. 3, at 12-14.) These rates are not directly in conflict with the General Terms and Conditions, since it would be possible to use the BOA rates to calculate project bids but use direct costs plus overhead and profit to calculate changes to the scope or duration of the project. But this approach is not the most harmonious way to read the Subcontract. Since it is clear that CMI was to use the BOA rates in its bid to determine the price of labor and materials for a water line, it would be illogical to insist that CMI then make a new calculation of direct cost plus overhead and profit on that same labor and material to determine the price of the credit to B&W Y-12 when the water line was removed from the Project.

The parties themselves rejected this approach. CMI admitted that in its early proposals for the equitable adjustment under Modification No. 1, it erroneously attempted to price the credits to B&W Y-12 at direct cost. (Tr. 470-71 (Bowden); Ex. 346.) This pricing lowered the credit to B&W Y-12 and increased the amount that CMI would receive. Ms. Wiseman disagreed with this approach and wrote CMI a sharply worded email in which she instructed CMI to use the BOA rates to price the credits. (Tr. 468 (Bowden).) B&W Y-12 also agrees that the BOA rates are used in the field when B&W Y-12 adds work scope to a project: “Once we’re in the field working and we add some additional scope and ask for a proposal, the subcontractor would use the BOA rates to price his proposal.” (Tr. 686 (Wiseman).) The course of dealing between the parties demonstrates that B&W Y-12 expected CMI to use the BOA rates to price additional scope or to give B&W Y-12 credits for work that was descope. These assumptions contradict the language in Section 49 of the General Terms and Conditions. As a result, the course of dealing between the parties presents a conflict between the General Terms and Conditions and the BOA. And by the terms of the Subcontract, the provisions of the BOA take precedence.

CMI was therefore correct to use the BOA rates to price both the credits to B&W Y-12 for the descope work and to price the increased management and other costs under Modification No. 1 and Modification No. 4 that the court will discuss below.

B&W Y-12 makes a final argument against the use of the BOA rates by citing Section 48 of the General Terms and Conditions, which relates to delays. This section provides that, “[n]otwithstanding any other provision in this Agreement, [CMI] shall not be entitled to profit on any adjustment or equitable adjustment for delay costs of any kind, including but not limited to, extended costs and loss of efficiency or productivity.” (Ex. 2 ¶ 48(b).) Because the BOA rates are all-inclusive and cover profit as well as overhead, B&W Y-12 asserts that the BOA rates cannot be used to calculate CMI’s costs for the extended Project time without violating Section 48(b)’s prohibition against profit on equitable adjustments for delay costs. The court agrees with B&W Y-12 that Section 48(b) prohibits CMI from receiving profit in this situation. But the court does not see a conflict in using the BOA rates as discussed above to calculate a baseline for these delay costs. Since the BOA rates include a ten percent profit margin (Tr. 528-29 (Williams)), the court will simply reduce any award that it grants CMI based on delays by ten percent.

C. Costs for UGSI

In its pricing for the equitable adjustment for Modification No. 1, CMI gave B&W Y-12 a credit for all of UGSI’s Subcontract cost for the deleted line items and then added back an amount of \$101,422.15 for costs incurred by UGSI in connection with the deleted items. Both parties agree that UGSI should receive \$81,137.72 for costs that UGSI expended on the descope

work.¹⁷ CMI asserts that the court should allow ten percent overhead and ten percent profit on this amount because the Subcontract allowed a restocking fee that would have cost B&W Y-12 more than the \$101,422.15 that CMI is requesting. The court is persuaded that, since the parties have agreed to the direct costs that UGSI expended, CMI is entitled to receive profit and overhead on this amount. But the court does not understand why CMI has determined UGSI's ten percent profit and overhead from the top down by calculating this percentage based on the overall price that CMI is charging to B&W Y-12 for UGSI's costs. It would be more logical to calculate profit and overhead from the bottom up by awarding CMI ten percent of the \$81,137.72 amount as profit and the same figure for overhead. Using the court's method, CMI is entitled to \$8,113.77 in profit and \$8,113.77 in overhead for UGSI's costs, resulting in a total award of \$97,365.26 (and not \$101,422.15 as CMI is requesting).

D. Extended Management Costs

CMI seeks to recover \$40,987.61¹⁸ for its management costs during the period of May 31, 2009, to July 2, 2009, the extended completion date that B&W Y-12 approved in CMI's revised schedule (and the date to which B&W Y-12 formally extended the Subcontract in Modification No. 2). This extension was necessary due to delays in the submittal process and the extension of the mobilization date. In its Findings of Fact, the court determined that two weeks of this delay were caused by B&W Y-12's failure to have the excavations ready and its decision to move the

¹⁷B&W Y-12 included this amount as part of the \$151,962.02 to which B&W Y-12 agreed that CMI was entitled as part of its equitable adjustment for Modification No. 1.

¹⁸In its Certified Claim for Modification No. 1, CMI calculated this amount to be \$41,837.27. (Ex. 407.) CMI later revised its claim to \$40,987.61, the figure on which the court now relies. (Ex. 446.)

Project start date from April 6 to April 20. The rest of the delay was caused by problems during the submittal process. The court found the parties were equally to blame for the difficulties in the submittal stage. Using a four-day work week, the court therefore holds that B&W Y-12 caused fourteen days worth of delay, which represents 70% of the time that Modification No. 1 extended the length of the Project.

The court finds that it is equitable to compensate CMI for the costs that were incurred due to the extension of the completion date. A number of cases from the United States Claims Court have held that plaintiffs may recover delay damages under similar clauses. For instance, the plaintiffs in American Line Builders, Inc. v. United States, 26 Cl. Ct. 1155 (1992) sought to recover damages for an extension of the contract performance time under a Changes clause that stated: “If any change under this clause causes an increase or decrease in the Contractor’s cost of, or the time required for, the performance of any part of the work under this contract . . . an equitable adjustment shall be made.” Id. at 1177. This language mirrors the language in Section 45 of the General Terms and Conditions of the CMI’s Subcontract. In American Line Builders, the Claims Court held that, “[u]nder the Changes clause, plaintiff can recover delay damages as compensation for extended performance due to the change.” Id. at 1181; see also Pathman Constr. Co. v. United States, 227 Ct. Cl. 670, 673 (1981); Merritt-Chapman & Scott Corp. v. United States, 192 Ct. Cl. 848, 851 (1970); Paul Hardeman, Inc. v. United States, 186 Ct. Cl. 743, 749-52 (1969). The court follows this reasoning here.

B&W Y-12 argues that the court’s reasoning is not supported by the Federal Circuit in the case of England v. Sherman R. Smoot Corp., 388 F.3d 844 (Fed. Cir. 2004). Before the Federal Circuit decided that case, the Board of Contract Appeals applied what was known as the

McMullan presumption, a rebuttable presumption that a modification extending the time for performance in a government contract meant that the United States was responsible for the delay. Id. at 851. England held that “the McMullan presumption is logically inconsistent” and that a contract modification is no proof that the agency issuing the modification (in that case, the United States; here, B&W Y-12) is responsible for the delay. The court finds no inconsistency in the Federal Circuit’s analysis. While the mere fact that the Subcontract was modified does not prove that B&W Y-12 was at fault, the holding in England does not prevent CMI from recovering delay damages if it is able to demonstrate that B&W Y-12 was the source of that delay.

Accordingly, the court awards CMI 70% of its requested management costs for Modification No. 1. This award represents management fees for the period of delay that the court has determined was caused by B&W Y-12. The court further reduces this award by ten percent as required by Section 48(b), which disallows CMI to recover profit on costs that are the result of delays. Based on these calculations, the court awards CMI \$26,083.02 for its extended management expenses.

E. CLA Rate Increases

CMI seeks to recover \$2,982.42 for the increase in the Construction Labor Agreement (CLA) rate of its manual labor through July 2, 2009. The CLA rates changed in May of 2009. CMI was required to pay these increased rates due to the extension of the Project time to July 2, 2009. CMI calculated its costs due to this increase in Trial Exhibit 451. B&W Y-12 did not offer any evidence at trial against these costs and the court finds that it is equitable to include this additional expense in the equitable adjustment for Modification No. 1. But because B&W Y-12

was only responsible for 70% of the delay, the court will award only 70% of these costs. The increased CLA rates do not appear to include any additional markups for profit, so the court does not need to make a further adjustment to its calculation under Section 48(b). As a result, the court awards CMI \$2,087.69 for the CLA rate increase.

F. Suspension of Work Clause and Section 49(b)

B&W Y-12 makes two further arguments why CMI should be barred from recovering any additional damages beyond the \$151,961.02 that B&W Y-12 has admitted it owes to CMI under Modification No. 1. First, B&W Y-12 asserts that CMI's claim under Modification No. 1 does not meet the requirements of Section 42 of the General Terms and Conditions, which states as follows:

42. SUSPENSION OF WORK.

...

(b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of [B&W Y-12] in the administration of this Agreement, or (2) by [B&W Y-12's] failure to act within the time specified in this Agreement (or within a reasonable time if not specified), an adjustment shall be made for any increase in the cost of performance of this Agreement (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption, and the Agreement modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of [CMI], or for which an equitable adjustment is provided for or excluded under any other term or condition of this Agreement.

(Ex. 2 ¶42.)

B&W Y-12 claims that Section 42 should be used to evaluate any assertion that B&W Y-12 issued the Notice to Proceed late or that Modification No. 1 was issued late. B&W Y-12 further contends that it acted within a reasonable amount of time when it issued these notices and

that CMI is therefore barred from recovery. The court is not persuaded by this argument for a number of reasons. While the court agrees with B&W Y-12 that Modification No. 1 was not issued late, the court has found that the delays for which CMI seeks damages under Modification No. 1 were caused in part by B&W Y-12's delays in the submittal process and B&W Y-12's failure to have the excavations ready. Moreover, to the extent that B&W Y-12's actions (especially the issuance of the Notice to Proceed) could be viewed as a "failure to act," the court holds that CMI is also entitled to equitable relief under Section 42. The court's finding that B&W Y-12 caused delays in the submittal process and in the excavations is simply another way of stating that B&W Y-12 failed to perform these actions within a reasonable amount of time under the Subcontract. But rather than relying on Section 42, the court has simply chosen to follow what it believes is the more complete analysis under Sections 45 and 49 (the Changes clause and the Equitable Adjustments clause).

B&W Y-12 also argues that CMI did not comply with Section 49(b) of the General Terms and Conditions, which provides:

49. EQUITABLE ADJUSTMENTS.

...

(b) Upon request, [CMI] shall submit proposals for equitable adjustment for review by [B&W Y-12]. Proposals must include an itemized breakdown of increases and decreases in direct cost for [CMI] and each subcontractor in at least the following detail: material quantities and costs; labor hours and rates for each trade; employment taxes; Workers' Compensation insurance; equipment hours and rates; and bond premiums.

(Ex. 2. ¶ 49.) Having reviewed the exhibits and testimony, the court concludes that CMI did provide an itemized breakdown of increases and decreases for the amount CMI is seeking to recover as an equitable adjustment under Modification No. 1. CMI submitted this itemization to

B&W Y-12 in its Certified Claim as well as in previous submissions. The court has discussed above why it was appropriate for CMI to use the BOA rates to price the costs that it submitted to B&W Y-12, even though Section 49 contains language about direct costs. The documentation that CMI submitted to B&W Y-12 was sufficient to comply with Section 49(b).

G. Summary of Award under Modification No. 1

Based on the revisions stated above, the court holds that CMI's equitable adjustment under Modification No. 1 should be calculated as follows:

Credits for deleted lines	-\$591,492.74
UGSI's costs incurred in connection with the deleted lines	\$97,365.26
Extended management costs	\$26,083.02
Increase in the CLA rates	\$2,087.69
Total of above items	-\$465,956.77

Because B&W Y-12 deducted \$769,104.63 instead of \$465,956.77, the court awards CMI damages under Modification No. 1 in the amount of the difference between these two figures: \$303,147.86.

III. Claim for Modification No. 4

Using the same reasoning that the court discussed above, the court finds that CMI is entitled to an equitable adjustment under Section 45(b) of the General Terms and Conditions of the Subcontract for Modification No. 4, which extended the completion date of the Subcontract until September 23, 2009. CMI may use the BOA rates to calculate this equitable adjustment, since that was the practice of the parties and since the terms of the Subcontract state that the

BOA provisions take precedence over the General Terms and Conditions. But CMI's overall award must be adjusted, since Section 48 of the General Terms and Conditions bar CMI from recovering profit for any damages based on delay. Furthermore, the court finds that it is only equitable to award CMI damages for the delays that were caused by B&W Y-12. The court considered extensively the relative fault of the parties in its Findings of Fact and determined that CMI presented substantial evidence to show that B&W Y-12 was responsible for 75% of the Project delay.

While Modification No. 4 only extended the Project completion date to September 23, 2009, the court finds that it is merely a technicality that B&W Y-12 never issued a further modification to extend this date until October 21, 2009, the date on which work was actually completed on site. B&W Y-12 did not offer any testimony as to why the extension only went to September 23, and the court finds that it is well within the court's equitable powers to consider the full extent of the Project's delay. At any rate, the court finds that CMI would alternatively be entitled to recover damages under Section 42 of the General Terms and Conditions (the Suspension of Work Clause) if the court had not based its analysis on Section 45 (the Changes Clause). And while B&W Y-12 asserts that CMI did not comply with Section 48 of the General Terms and Conditions (which contains certain notice requirements that CMI must fulfill before it can claim any delay damages under Section 42), the court finds that CMI's Daily Activity Reports and weekly delay logs were replete with specific information about the date, cause, and circumstances regarding the various delays. As a result, CMI may recover under a number of provisions of the Subcontract. This finding supports the court's decision to exercise its equitable powers to consider the reasons why the Project was extended until October 21, 2009, the date

when work was actually finished.

The court will now consider the specific damages that CMI seeks for its equitable adjustment under Modification No. 4.

A. Additional Management Costs

CMI seeks \$148,062.50 in damages for additional management costs from July 2, 2009, until September 23, 2009, and \$66,533.12 in damages for additional management costs from September 23, 2009, until October 21, 2009. (Ex. 460.) As the court discussed above, it will consider the full amount of the Project delay in its assessment of the appropriate equitable adjustment under Modification No. 4. Together, these costs total \$214,595.62.

The extra management costs are directly related to the duration of the Project. Since the court has determined that B&W Y-12 caused only 75% of the Project delay, the court finds that CMI should only recover 75% of its additional management expenses, or \$160,946.72. And because CMI cannot recover profit for delay damages under Section 48 of the General Terms and Conditions, the court further reduces CMI's award to account for the ten percent profit rate. As a result, the court awards CMI \$146,315.20 for additional management costs.

B. Additional Job Burden Costs

CMI seeks \$37,871.52 in damages for additional job burden costs, which cover the expenses of extra hotel nights, meals, and equipment rentals. Like management costs, these job burden costs are directly related to the duration of the Project. Accordingly, the court reduces CMI's requested award, which it documents in Trial Exhibit 450¹⁹, to reflect that CMI may only

¹⁹B&W Y-12 did not question its witnesses about the job burden costs and did not object to the specific figures cited in Trial Exhibit 450.

recover 75% of these damages. Since the job burden costs are based on direct costs and do not include a profit margin, the court does not need to further reduce CMI's award under Section 48. Accordingly, the court awards CMI \$28,403.64 for additional job burden costs.

C. Additional Labor Expenses

CMI also seeks to recover its additional labor expenses, but these are somewhat harder to measure as they relate more directly to the amount of work performed and not necessarily to the overall length of the Project. CMI proposes two alternate methods to calculate these expenses. First, CMI added up the number of extra labor hours caused by specific delays that it recorded in delay logs and Daily Activity Reports (DARs) from the period of April 27, 2009, to July 9, 2009. (Ex. 423.) These costs totaled to \$66,243.96. CMI then calculated the number of extra labor hours that occurred during the remainder of the Project using a measured mile analysis, which resulted in a claim for \$137,294.91. The court will discuss both of these methods below.

1. Specific Delays in the Delay Logs and Daily Activity Reports

In its REA for Modification No. 4, CMI provided B&W Y-12 with a summary of specific delays from approximately the first two months of the Project. (Ex. 423.) CMI has provided the court with a complete copy of these materials, including its delay logs (Ex. 98), its DARs (Ex. 99), and a set of daily emails that Mr. Wells wrote to Mr. Williams, Ms. Burch-Kennedy, and Mr. Bowden while Mr. Wells was on site (Ex. 100). B&W Y-12 has submitted its own Daily Reports, which were prepared by the STR (first Mr. Monleon, then Mr. Darden) (Ex. 97).

The court has carefully reviewed these materials and finds that they are useful estimates to demonstrate how the delays that were discussed in a general sense above affected the Project on a daily basis. For example, CMI cites specific delays due to inadequate excavations (April

22-23, 27-29); dewatering problems (April 30, May 7, June 11); additional excavations needed for offsets (May 13, 14, 18-21, 26-27); and delayed excavations (June 29-30, July 1, 7-8). For its part, B&W Y-12 attributes delays to CMI for liner problems (May 26) and the lack of an ES&H Representative on site (April 20, 23, May 27-28, June 2). This cursory overview corroborates the court's findings above that B&W Y-12 was responsible for the majority of delays, mostly due to problems with the excavations. CMI also contributed to the Project's extension, but CMI's contribution was much smaller.

There are a number of flaws with using these materials (the delay logs, DARs, emails, and Daily Reports) to calculate the exact number of delay hours that were caused by each party. First, some of the cited delays overlap with each other. For instance, on May 27, 2009, CMI asserts that it was waiting on B&W Y-12 to excavate offsets that were found between sites 4 and 5. (Ex. 372, at 2949.) But B&W Y-12 claims that no work could have been performed that day anyway because CMI did not have a safety officer on site. (Ex. 99, at 1044.) Second, the number of lost hours claimed by a party do not always correspond to other materials provided by that party. For example, CMI claimed that it had a 10-hour delay on June 29 in its delay log. (Ex. 372, at 2953.) But an email from Mr. Wells described expansion work that was performed that day until 3:30 p.m., at which time he noted that CMI was "on delay" while awaiting further excavations. (Ex. 100, at 3121.) This example illustrates another problem involving overlap. The fact that CMI was on delay while awaiting excavation work or dewatering does not mean it did not have other work it could do. The court is not convinced that CMI has always provided this analysis and finds that its estimate of extra labor costs during this period is likely to be somewhat high as a result. As a result, the court chooses not to use these calculations to assess

CMI's damages for extra labor costs.

2. The Measured Mile Analysis

CMI asserts that it incurred additional labor hours that are not included in its claim for specific delays. In order to calculate these costs, CMI used a measured mile analysis. First, Mr. Bowden calculated the productivity of CMI's work crews when they were working north of the creek, which he claimed was an area that was not as impacted and suffered fewer delays than any of the other areas in the Project. (Tr. 340-47 (Bowden).) This work was performed between September 10, 2009, and October 15, 2009, a period that represents approximately five weeks. CMI looked at its records to calculate total work hours during this period and subtracted any hours for work south of the creek, a calculation that was provided by Mr. Wells. (Wells Dep. 50-53, Ex. 502.) Mr. Bowden then divided the number of feet of pipe that were cleaned north of the creek (660 feet) by the hours of work that it required CMI to clean this section (631 hours over a period of 21 work days). Using this analysis, Mr. Bowden determined that CMI's work crews had cleaned 1.046 linear feet of pipe per hour while working north of the creek. (Ex. 458.)

In total, CMI cleaned and lined 2,107 linear feet of pipe. At a rate of 1.046 linear feet per hour, CMI should have been able to clean and line this length of pipe in 2,014.4 hours. Instead, CMI calculated that it spent 5,988.5 craft labor hours on the Project. (Ex. 459.²⁰) Using these figures, CMI estimated that it lost 3,974.1 hours²¹ due to the Project impacts that were caused by B&W Y-12. From these hours, CMI subtracted the 988 hours that were included in its claim for

²⁰B&W Y-12 did not object to CMI's calculation that it had spent 5,046.5 craft labor hours on the Project.

²¹The figures CMI cites at page 44 of its Findings of Fact and Conclusions of Law (Dkt. No. 96) appear to be an error. The correct figures are cited at page 87.

specific delays from the delay logs to arrive at the figure of 2,986.1 additional craft labor hours that were not included in other claims. Using an average BOA rate of \$45.98 for the differing labor rates (see Ex. 458), CMI calculated that it was owed \$137,294.91 by B&W Y-12 for the additional hours.

The measured mile approach has been upheld in Tennessee as a reasonable method to calculate loss of productivity damages. See Lee Masonry, Inc. v. City of Franklin, 2010 WL 1713137 (Tenn. Ct. App. 2010). But B&W Y-12 objects that this method requires CMI to determine a base period when it was not impacted (here, the period from September 10 to October 15) and that this base period is subject to a good deal of subjectivity. The probative value of the measured mile analysis “necessarily depends upon the comparability of the circumstances surrounding the sample to the circumstances which would have prevailed for the work which could not be directly measured.” Lamb Eng’g & Constr. Co., EBCA No. C-9304172, 97-2 B.C.A. (CCH) ¶ 29,207, at 93-94 (1997). B&W Y-12 argues that CMI was nearing the end of the Project, when it was likely that the workers would have worked out any kinks and increased their efficiency.

The court agrees with B&W Y-12 that CMI’s measured mile analysis is flawed because its base period is not likely to be representative of the productivity that CMI could have achieved during the first few weeks of the Project, even if it had not been impacted. The pipe located north of the creek may have lacked some of the offsets and fittings that complicated CMI’s work south of the creek. After all, the construction of the top story of a building does not necessarily take the same amount of time as the construction of the first floor. A simpler approach that avoids the problems of an unrepresentative base period is to use CMI’s original estimate of the

number of craft hours the M6-01 line would require instead of extrapolating this number from CMI's productivity rate in the final weeks of the Project. CMI's original estimate, adjusted for sections of M6-01 that were descope, was for 2,327 hours of craft labor. (Ex. 459, Tr. 505 (Bowden).) Comparing this number with the 5,988.5 hours that the Project actually required, the court finds that CMI required an additional 3,661.5 hours of craft labor for the Project.

As the court has noted above, CMI's estimate of damages for the 988 hours of craft labor that it included in its claim for specific delays is likely to be somewhat high. Indeed, multiplying these 988 hours by the average BOA rate of \$45.98 results in a claim of \$45,428.24, which is significantly lower than CMI's requested claim of \$66,243.96 for these extra hours. The court finds that this more general measure of the additional labor costs is more accurate than CMI's method of adding up the costs of each individual delay. Accordingly, the court will not break up the extra labor costs into specific delays and more general impacts, but will use the same method to assess all of these damages. The court calculates that the delays and impacts to the Project cost CMI 3,661.5 hours of extra craft labor. Using the average BOA rate of \$45.98, these hours represent an additional cost of \$168,355.77.

The extra labor hours that CMI cites in its calculations include hours from weeks like the week of June 15, when the court has found that CMI was responsible for the Project delay. (Ex. 458.) As the court discussed above, the labor hours depend on the amount of work performed and not directly on the overall length of the Project. But given that CMI's extra labor hours include hours that correspond to days when CMI was responsible for the delay, the court finds that it is equitable to apply the same reduction it used for the additional management and job burden costs and award CMI only 75% of its additional labor costs, or \$126,266.83. And

because this figure is based on the profit-inclusive BOA rates, the court must apply a further reduction under Section 48.

For these reasons, the court awards CMI \$114,788.03 for its additional labor costs.

D. Summary of Award under Modification No. 4

Based on the revisions stated above, the court holds that CMI's equitable adjustment under Modification No. 4 should be calculated as follows:

Extended management costs	\$146,315.20
Additional job burden costs	\$28,403.64
Additional labor costs	\$114,788.03
Total of above items	\$289,506.87

As a result, the court awards CMI \$289,506.87 for its increased costs under Modification No. 4.

IV. B&W Y-12's Counterclaims

Before turning to the merits of B&W Y-12's specific counterclaims, the court must address three threshold questions: whether B&W Y-12 was required to provide CMI with notice of its counterclaims during the course of the Project, whether B&W Y-12 can recover costs from CMI even though it has already been reimbursed for those costs by the NNSA, and whether B&W Y-12 is estopped from arguing that CMI caused the Project delays.

A. Lack of Notice

CMI claims that B&W Y-12 failed to give CMI formal notice of its counterclaims as required by Section 56 of the General Terms and Conditions of the Subcontract, which provides as follows:

56. BACKCHARGE WORK. (a) Backcharge work is a cost sustained by

[B&W Y-12] or the Government and chargeable to [CMI] for the performance of work which is [CMI]'s responsibility under this Agreement.

(b) Upon identification of an actual or anticipated backcharge, [B&W Y-12] will provide [CMI] a written notice which shall describe the work to be performed, the schedule for performance, and the cost to be charged [to CMI]. . . .

(Ex. 2 ¶ 56.) While the court has found that B&W Y-12 did not provide CMI with any written notice during the course of the Project of any of its counterclaims, only the counterclaim about the water trucks involved work that was arguably CMI's responsibility. As the court discusses below, B&W Y-12 was required to give CMI more definite notice that it would later seek to charge it for the costs of the truck rentals since these costs were arguably a backcharge. The other claims concern either materials provided by B&W Y-12 (the valves) or work that was B&W Y-12's contractual responsibility that B&W Y-12 contends was delayed because of CMI (the additional labor, management, and extra shoring box rentals). These claims do not concern "work which is [CMI's] responsibility" under the Subcontract.²² As a result, Section 56 did not require B&W Y-12 to issue formal, written notice of these charges.

CMI also argues that, even without an express provision in the Subcontract, B&W Y-12 had an implied obligation to give CMI notice that it would later seek to recover costs from CMI for the counterclaims. The court agrees. Tennessee courts have held that there is an implied obligation to give notice as a matter of equity and fairness. See McClain v. Kimbrough Const. Co., Inc., 806 S.W.2d 194, 198 (Tenn. Ct. App. 1990) ("In the absence of an express notice provision, the courts will frequently imply an obligation to give notice as a matter of common

²²The court disagrees with CMI's characterization of Ms. Wiseman's testimony as admitting that B&W Y-12's counterclaims were properly characterized as backcharges. (Tr. 637-38 (Wiseman).) Her testimony was inconclusive and unhelpful on this issue. (See id. at 639.)

equity and fairness”) (citation omitted). The purpose of this implied requirement is to give the other party an opportunity “to repair the defective work, to reduce the damages, to avoid additional defective performance, and to promote the informal settlement of disputes.” Id. In its Order issued on June 6, 2012, the court already held that B&W Y-12 had “an implied obligation to give CMI notice of extra charges incurred so that CMI could have an opportunity to mitigate those costs.”

B&W Y-12 disagrees with the court’s position because it asserts that this implied obligation is inconsistent with the express provisions of the Subcontract. The provisions that B&W Y-12 cites are two clauses that require CMI to provide “written notice” to B&W Y-12 in certain situations but do not impose a similar notice obligation on B&W Y-12, and three clauses that discuss B&W Y-12’s duty to provide written notice or an opportunity to cure in certain instances. B&W Y-12 argues that because the parties knowingly and expressly allocated certain obligations to provide notice in the Subcontract, it would be improper to impose any additional requirements. The court is not persuaded that an implied obligation to give notice in circumstances not contemplated by the Subcontract is somehow inconsistent with the express provisions of the Subcontract. This implied obligation does not directly conflict with any of the Subcontract’s express provisions. And the Subcontract is silent about many matters, including B&W Y-12’s ability to bring counterclaims in response to litigation by CMI.

As CMI argues, the implied duty to give notice is part of the implied duty of good faith and fair dealing. And under Tennessee law, as B&W Y-12 admits, “every contract imposes on the parties a duty of good faith and fair dealing in its performance.” German v. Ford, 300 S.W.3d 692, 706 (Tenn. Ct. App. 2009). In addition, the court views the issues raised by B&W

Y-12 in its counterclaims less as a separate breach of contract action and more as factors which the court should consider when deciding what equitable adjustment is appropriate for CMI under the facts of the case. The court finds that it is equitable to consider B&W Y-12's assertions in this context, but in fairness it will only allow B&W Y-12 to recover costs where it gave CMI the opportunity to mitigate those damages. For some of B&W Y-12's claims, additional notice would not have allowed CMI to repair its work, reduce its damages, or serve any other purpose which provides the rationale for an implied notice requirement. In those cases, which the court analyzes below, the lack of notice does not serve as a bar to B&W Y-12's recovery.

B. Reimbursement of Costs by the NNSA

The parties disagree about whether the M&O contract between B&W Y-12 and the NNSA requires B&W Y-12 to give back to the DOE any money it recovers from CMI in this lawsuit. B&W Y-12 cites paragraph (h) of Clause I.143 in the M&O contract, which states that “[a]ll collections accruing to the contractor in connection with the work under this Contract . . . shall be Government property.” (Tr. 1013 (Wilson); Ex. 494.) CMI argues that this clause only applies to collections accruing to B&W Y-12 from the DOE, and not from third parties. But the correct interpretation of this clause is a moot point. As discussed in its Findings of Fact, the court is satisfied that any money that B&W Y-12 recovers from this lawsuit will be credited to the DOE.²³ B&W Y-12 will not receive a double recovery from its counterclaims.

CMI also asserts that the NNSA never gave B&W Y-12 written authorization to pursue its counterclaims. While the court has found that, as a factual matter, CMI's assertion is correct,

²³The money may be sent back to the DOE, or it may simply be used for allowable costs for which DOE would have given B&W Y-12 the funds anyway.

the court also holds that B&W Y-12 was not required to obtain this authorization. Section I.150(a) of B&W Y-12's M&O contract provides that a "contractor may, with the prior written authorization of the contracting officer, . . . initiate litigation against third parties." (Tr. 1011, 1022-23 (Wilson); Tr. 763 (Albaugh); Ex. 495.) But here, B&W Y-12 was not the party who initiated the litigation. More importantly, Mr. Wilson testified that he has never requested permission from the DOE or the NNSA to file a counterclaim. (Tr. 1024 (Wilson).) And Ms. Albaugh stated that she was aware of the pending counterclaim against CMI, explaining that B&W Y-12's M&O contract with the NNSA tells B&W Y-12 to "prudently do the job. I would expect that they would pursue all avenues, if the government's best interest is not being met." (Tr. 762-63 (Albaugh).) The court finds that nothing in the M&O contract between B&W Y-12 and the NNSA precludes B&W Y-12 from pursuing its counterclaims.

Similarly, there is nothing in the Subcontract between B&W Y-12 and CMI that would bar B&W Y-12 from recovery. While the court does not see any specific provision in the Subcontract that discusses B&W Y-12's ability to recover funds that have already been paid to it by the NNSA, a party to a contract may always recover its damages against a breaching party. In addition, several provisions in the General Terms and Conditions expressly permit B&W Y-12 to recover damages or bring litigation against CMI. For example, Clause 58(b) states that if CMI defaults, B&W Y-12 should "take over the work and complete it." In that case, CMI "shall be liable for any damage to [B&W Y-12] resulting from the termination, including any increased cost incurred by [B&W Y-12] in completing the work." (Ex. 2 ¶ 58(b).) B&W Y-12 also points to Clauses 27, 28, 53, 54(k), and 60(c)(5) as additional examples where the Subcontract contemplates that B&W Y-12 may recover damages from CMI.

CMI argues that, regardless of whether the M&O contract and the Subcontract permit B&W Y-12 to bring its counterclaims, Tennessee law does not. Under Tennessee law, one of the elements of a breach of contract claim is proof of damages caused by the breach. See, e.g., Life Care Ctrs. of America, Inc. v. Charles Town Assocs. Ltd. P'ship, LPIMC, Inc., 79 F.3d 496, 514 (6th Cir. 1996). CMI asserts that B&W Y-12 has failed to prove it suffered any damages because it has already been reimbursed by the NNSA for the costs discussed in its counterclaims.

CMI focuses its argument on the correct application of the collateral source rule, which is a doctrine generally applied in tort lawsuits that states: “[A] tortfeasor cannot escape liability for wrongdoing merely because of the fortuitous circumstances of reparation from a collateral source.” Mason-Rust v. Laborers’ Local 42, 435 F.2d 939, 945 (8th Cir. 1970). Tennessee does not apply the collateral source rule to contract actions. Safeco Ins. Co. v. City of White House, 191 F.3d 675, 693 (6th Cir. 1999). As a result, CMI argues that B&W Y-12 cannot recover any money from CMI that has already been paid to B&W Y-12 by the NNSA.

The cases that CMI cites in support of its position are not clear on this point. In Safeco, for instance, the City of White House sued the lowest bidder on an EPA-funded municipal construction project when he withdrew his bid, even though the EPA had already given White House a grant to compensate it for a “bid overrun.” Id. The Sixth Circuit agreed that Tennessee courts do not apply the collateral source rule to contract actions and remanded the case because the district court had not considered evidence that White House had received a compensatory EPA grant. Id. But in a footnote, the Sixth Circuit stated: “White House also claims that an EPA regulation will require it to reimburse EPA. The regulation does not clearly apply, however, and White House should address this argument to the district court.” Id. at 693, n.12. The Sixth

Circuit's opinion suggests that, if it were clear that White House would have to reimburse the EPA, White House would have a stronger case. On remand, the district court denied White House any recovery. It emphasized that the EPA itself, who was a named party to the lawsuit, had the right to sue the bidder but that the EPA did not elect to do so. Safeco Ins. Co. v. City of White House, 133 F. Supp. 3d 621, 630-31 (M.D. Tenn. 2000).

Here, the court has found that B&W Y-12 will reimburse the NNSA with any funds it recovers from this lawsuit. Moreover, neither the NNSA or the DOE is a party to the suit. On the basis of these distinctions, the court finds that Safeco is not entirely applicable. Similarly, CMI has cited the case of Drewry v. Continental Casualty Co., 1992 WL 60876 (Tenn. Ct. App. 1992), in which the Tennessee Court of Appeals rejected an attempt to expand the collateral source rule to breach of contract actions. The Court of Appeals denied recovery to the plaintiffs, noting that the plaintiffs had "no out-of-pocket losses, and [did] not have any legal obligations to reimburse any person or organization which paid such expenses." Id. at *6. Like the Sixth Circuit in Safeco, the Court of Appeals in Drewry noted that the plaintiffs did not have to reimburse the organization who paid its expenses. The relationship between B&W Y-12 and the NNSA is different, as the court has found that the NNSA will be reimbursed even if this reimbursement is not required by the M&O contract. Accordingly, the court does not find that B&W Y-12 is barred from bringing any counterclaims against CMI under the holdings of Safeco and Drewry.

CMI cites another case which is more factually similar to the situation here. In Austin Co. v. International Brotherhood of Electrical Workers, 665 F. Supp. 614 (N.D. Ill. 1987), the district court held that on a claim to which the collateral source rule did not apply, the general

contractor could not recover from a union costs that had already been paid to the general contractor by the owner. The relationship between the general contractor (Austin) and its owner (MCI) is similar to the relationship between B&W Y-12 and the NNSA:

[W]hile the contract between Austin and MCI provides that MCI will reimburse Austin for losses and expenses not compensated by insurance “or otherwise” that Austin sustains in connection with the work, the contract also provides that all refunds which Austin receives shall accrue to MCI and that Austin shall make provision to secure said funds. Consequently, according to Austin, if it is awarded damages in this case, it will, under the terms of its contract, reimburse MCI accordingly.

Id. at 616-17. The Austin Co. court found that the relevant inquiry was “whether, at the time the damage issue was litigated, the plaintiff had been fully reimbursed.” Id. at 618. The court then concluded that the collateral source rule did not apply because MCI had an implied right of subrogation for the costs that the union had caused Austin if MCI had already paid Austin those costs. As a result, Austin’s damages award was “reduced by the amount of those payments.” Id. at 621.

While Austin Co. provides well-reasoned authority for the proposition that only the NNSA should be able to recover costs that it has already paid B&W Y-12 for CMI’s performance, the holding in this opinion is not followed universally. The Eighth Circuit, for instance, issued a contrary opinion. In Ford Motor Credit Co. v. Wintz Co., 184 F.3d 778 (8th Cir. 1999), the defendant (Wintz) defaulted on a loan from the Ford Motor Credit Company (FMCC), which had financed the purchase of a number of trucks manufactured by the Ford Motor Company (Ford). The agreement between Ford and FMCC provided that Ford would reimburse FMCC for all losses it sustained on the transaction. FMCC brought a breach of contract action against the individual owner of the Wintz Company, who had guaranteed

repayment of FMCC's loan. Arguing, as CMI does here, that the collateral source rule did not apply to contract claims, Mr. Wintz contended that FMCC sustained no damages because Ford reimbursed FMCC for its losses. The Eighth Circuit rejected this argument because FMCC was obligated to reimburse Ford with any funds it recovered in the litigation:

Even if the collateral source rule does not apply to this case, that is, even if double recovery is prohibited, no reduction in the amount of damages is required because there is no double recovery. Wintz's payment of the judgment against him will do no more than make FMCC whole.

Id. at 780. The Eighth Circuit did not require Ford to bring these claims against Mr. Wintz, but allowed FMCC to do so.

Other courts have followed the Eighth Circuit. See, e.g., Lincoln Gen. Ins. Co. v. Access Claims Adm'r, Inc., 596 F. Supp. 2d 1351, 1378 (E.D. Cal. 2009) (declining to offset amounts the plaintiff recovered in a breach of contract claim where the plaintiff's reinsurance agreement required it to reimburse the reinsurer should the plaintiff recover); see also Hubbard Broadcasting, Inc. v. Loescher, 291 N.W.2d 216 (Minn. 1980) (refusing to offset the defendant's recovery in a breach of contract action by the amounts the defendant had been loaned by his new employer since the defendant's agreement with his new employer required him to repay the loan should he recover). These cases focus on the question of whether a party will receive a double recovery. The court adopts this approach and holds that, since B&W Y-12 will not receive a double recovery from any funds that it recovers from CMI, it may pursue its counterclaims. The fact that the collateral source rule does not apply merely means that double recovery is prohibited. Under the facts of this case, the court has determined that such a windfall is not a concern.

The court's ruling is supported by an alternate interpretation of the costs that B&W Y-12 seeks to recover which the court noted in its discussion of the implied notice requirement. While B&W Y-12 has framed its assertions as counterclaims, the issues that B&W Y-12 raises can be properly considered by the court as factors in its determination of the appropriate equitable adjustment that CMI is owed under the Subcontract. Had B&W Y-12 responded to CMI's REA for Modification No. 4, it likely would have argued that any equitable adjustment to CMI should be reduced by the cost of the water trucks, the shoring boxes, the valves, and the additional labor. Instead, the parties were unable to resolve their dispute and have asked the court to use its equitable powers to arrive at a just disposition of the matter. The court finds no reason why it is barred from considering costs that were incurred by B&W Y-12 due to CMI's actions when determining the equitable adjustment that is owed CMI.

C. Estoppel Argument

CMI argues that B&W Y-12 made representations to the DOE that now estop B&W Y-12 from claiming that CMI was responsible for the delays. The court does not see any inconsistency in B&W Y-12's representations. While B&W Y-12 stated that delays were caused by "differing site conditions" in internal Trend Notices and reports to the DOE, these reports were written at too general a level to preclude B&W Y-12 from now seeking damages due to more specific problems. B&W Y-12's use of the phrase "differing site conditions" referred to the impact of conditions it encountered on B&W Y-12's schedule for the entire PWSU project. (Tr. 782 (Blair).) The purpose of the reports that B&W Y-12 issued to the DOE was to communicate "an overall assessment of how the Project is doing cost and schedule wise and the variance analysis is to give just an overview of the impacts we are having." (Tr. 608 (Benton).) The court finds

that B&W Y-12's general representations to the DOE do not estop B&W Y-12 from claiming that CMI caused delays to the Project.

D. Specific Counterclaims

For the reasons stated above, the court will consider the merits of B&W Y-12's counterclaims.

1. Water Trucks

The Subcontract provisions are unclear about which party should bear the costs for the water truck rental when no hydrants are available near the work site. The Supplemental Conditions state that B&W Y-12 would "provide a water source at existing locations" and that CMI would "provide portable water holding tanks with discharge pumps or mobile water tanker where [B&W Y-12] does not provide a water course convenient to [CMI's] work area." (Ex. 6, at 1821.) The walk-through at which B&W Y-12 told CMI that not all the hydrants would be available did not occur until early May, so it is unclear if CMI understood "existing locations" to include those hydrants that were later taken out of service. In any event, the court has found that Clarification No. 1 was incorporated into the Subcontract, which required B&W Y-12 to provide a "water source (Hydrant) within 100 ft of line for rehabilitation." (Ex. 143.)

It is unclear from the record if the water trucks were only used when there were no hydrants within one hundred feet of the line. But the court does not need to reach this factual question. The court also does not need to decide if Clarification No. 1 necessarily takes precedence over the requirements in the Supplemental Conditions. Instead, the court need only determine that these provisions were in tension and rendered the Subcontract ambiguous on the question of which party bore responsibility to provide water when a hydrant was out of service.

Because the Subcontract is ambiguous, B&W Y-12 has not carried its burden to show that CMI breached the Subcontract by failing to pay for the trucks. The court finds that, if B&W Y-12 wished to charge these costs to CMI, B&W Y-12 had a duty to give CMI clear notice of its intentions before it rented the trucks. This duty was expressly required by Section 56(a) of the General Terms and Conditions and, as discussed above, implicitly required due to considerations of fairness and equity. B&W Y-12's email in mid-August, in which it suggested that it might seek a backcharge for the rental costs, was an insufficient means to provide this notice. For these reasons, CMI is not liable for the costs of the water truck rentals.

2. Shoring Boxes

The court finds that CMI is not responsible for the costs of the shoring boxes for a number of reasons. First, as the court discussed in its Findings of Fact, B&W Y-12 was responsible for the shoring costs. The court has found that a number of additional shoring boxes were required due to the difference in pipe depths between the site drawings and the actual conditions. B&W Y-12 must pay for these additional shoring boxes and it has not subtracted these costs from its calculations for damages.

In addition, B&W Y-12 must establish that additional shoring boxes were required to recover the costs of additional rentals. The court is not persuaded that B&W Y-12 has met this burden. As discussed in the court's Findings of Fact, B&W Y-12 calculated its damages from the shoring box rentals by comparing the number of days each pit was to be open according to the revised schedule of April 15, 2009, with the number of days each pit was actually open. But B&W Y-12's calculations appear to be based on the assumption that only a limited number of pits would be available.

B&W Y-12 has supplied a spreadsheet to the court in which it calculates that, according to the April 15 schedule, the excavations for the Project were scheduled to be open for 125 days, cumulatively.²⁴ (Dkt. No. 98-1.) Once work began, B&W Y-12 asserts that shoring boxes were actually required for 563 days, cumulatively. (Id.) But the court has found that CMI's proposed schedule in which up to twenty-one pits were open at the same time was reasonable and that B&W Y-12's inability to open this many excavations at the same time was a major source of delay on the Project. According to CMI's schedule, shoring boxes would have been required for 488 days, cumulatively. (See Ex. 255.) This proposed schedule involved fewer days than what actually occurred, but many more shoring boxes for each day since more pits would have been open at any given time. As a result, it appears to the court that the number of shoring box rentals required by CMI's proposed schedule was not far off from the number of shoring box rentals that actually occurred.

The court's estimates are rough, but they underscore the problem inherent in the calculations that B&W Y-12 has submitted to the court. B&W Y-12 has failed to establish an accurate baseline of how many shoring box rentals would have been needed if the Project had been finished according to schedule. Because of the absence of a baseline, the court has no way to measure the extra expenses that B&W Y-12 may have incurred due to the shoring boxes. B&W Y-12 has not carried its burden to show that the expenses caused by the delay in the amount of time that each pit was open outweighed the savings B&W Y-12 gained by opening

²⁴In other words, B&W Y-12 multiplied the number of excavations by the number of days each excavation was open. Under this method, ten excavations that were each open for ten days (no matter whether those ten days were consecutive or overlapping) would constitute 100 days of shoring box rentals.

fewer pits, especially given that any additional boxes that were required because the pits were deeper than expected were B&W Y-12's responsibility. The court recognizes that, in a case of this nature, all of the damages awarded by its ruling are estimates to some degree. But any damages incurred by additional shoring boxes are simply too speculative for the court to award them, even under its equitable powers.

An independent and alternate basis for the court's ruling is that B&W Y-12 did not provide CMI with adequate notice that it was planning to charge CMI for the costs of the shoring boxes. The court agrees with B&W Y-12 that the Backcharge clause in the General Terms and Conditions does not apply to the shoring boxes. But even if B&W Y-12 was not required to give CMI notice under Section 56(a), it was still necessary to do so under B&W Y-12's implied duty to provide notice and to perform the Subcontract with good faith and fair dealing. Because B&W Y-12 failed to do so, CMI had no opportunity to mitigate any of these costs.

Because the court rules against B&W Y-12 for the costs of the shoring boxes, it DENIES AS MOOT CMI's Motion to Strike B&W Y-12's calculation of damages for its shoring box claim. (Dkt. No. 99.)

3. Valves

The parties do not dispute that CMI is responsible for the costs of the valves that B&W Y-12 supplied to meet fire protection standards. But CMI asserts that B&W Y-12 did not prove the value of the valves it actually provided. The court agrees that B&W Y-12 has not been clear on this point. At trial, B&W Y-12 asserted that it provided CMI six valves at a cost of \$900 each. But in its Proposed Findings of Fact and Conclusions of Law, B&W Y-12 states: "B&W Y-12 provided five valves to CMI." (Proposed Findings of Fact and Conclusions of Law ¶ 195,

Dkt. No. 98.) In his deposition, Mr. Hayes observed that the listed price for each of these valves was \$1,024.39.” (Hayes Dep. 33-34, Dkt. No. 97.) As CMI noted, the document on which Mr. Hayes was relying was from 2010, and may not reflect the accurate price in 2009 when B&W Y-12 gave CMI the valves.²⁵ But given that there is no dispute that B&W Y-12 provided CMI with valves and that CMI is responsible for the costs of those valves, the court will use the value of \$1,000 for five valves to estimate B&W Y-12’s damages. This round number lies between the amount B&W Y-12 originally requested (\$900) and the amount that Trial Exhibit 489 reflects is the value of a butterfly valve (\$1,024.39). The court recognizes the flaws with its method, but finds that it is more equitable to allow B&W Y-12 to recover a rough estimate for its valves than to recover nothing. The court has similarly allowed CMI the use of estimates to avoid an injustice. The court relies on its equitable powers to calculate the parties’ damages using this method.

Since CMI, in essence, bought the valves from B&W Y-12, the court cannot see how any additional notice would have mitigated this cost. And CMI did not present any evidence that B&W Y-12 was simply giving CMI the valves. Accordingly, the court finds that notice of this counterclaim was not necessary and awards B&W Y-12 \$5,000 for the costs of the valves that it

²⁵CMI has objected to the introduction of Trial Exhibits 484, 485, 489, 490, 491, and 492 and the parties argue extensively over whether these exhibits may be included. The court finds that it need not address this argument because it has had no occasion to consider Exhibits 484, 490, 491, and 492. As discussed in the following section, the court uses Exhibit 485 only to calculate the hourly rate for the STR. The court compares that rate to information submitted by CMI to assess its reasonableness. To the extent that the court has relied on Exhibit 489 to inform its ruling of an appropriate estimate for B&W Y-12’s damages, Mr. Hayes testified that Exhibit 489 was a detail document describing B&W Y-12’s equipment and material prices. (Hayes Dep. 33, Dkt. No. 97.) He also stated that he would rely on the document and believed that the unit price for the UL-listed valves was accurate. (Id.)

provided to CMI.

4. Extended Labor and Management Costs

In its Findings of Fact, the court held that the costs that B&W Y-12 seeks for additional labor were excavation costs that were not time sensitive. In other words, B&W Y-12 would have incurred these costs whether the excavations had occurred before or after July 2, 2009. The court found that a similar problem bars B&W Y-12 from recovering costs incurred due to the additional hours that Mr. Cox, who was responsible for supervising the excavations, spent on the Project. As the court discussed in its analysis of B&W Y-12's claim for the costs of additional shoring box rentals, B&W Y-12 did not open and maintain the number of excavations that CMI required to accomplish the Project on schedule. B&W Y-12 has not demonstrated to the court that it expended more money on labor and management due to the extra months that the pits were open, since B&W Y-12 also would have been required to expend resources to open a greater number of pits for a shorter overall period of time. While B&W Y-12 may have had to spend more money to maintain and dewater the pits, the court has found that CMI caused only a small part of the Project delay. Because these damages are so incidental and speculative, and because B&W Y-12 has not segregated these costs from the much larger costs associated with delays caused by B&W Y-12 and activities that were B&W Y-12's responsibility under the Subcontract, the court does not award B&W Y-12 any damages for additional craft labor costs or for any additional time that Mr. Cox may have spent on the Project.

In contrast, the need for an STR to be on site was more directly tied to the duration of the Project. Just as CMI incurred additional management costs for Mr. Bowden and others because of the Project delay, B&W Y-12 incurred additional management costs for its STR. But while

B&W Y-12 seeks to recover for costs related to both Mr. Monleon and Mr. Darden, the court has found that there was only one STR present on the Project at one time. As a result, B&W Y-12 may only recover for the additional management hours of one of its STRs. Another way of framing this problem is to consider the length of the delay that was attributable to CMI, which the court has found was 150 hours. Whether those 150 hours occurred while the STR was Mr. Monleon or Mr. Darden is not important, since both STRs worked at the rate of \$101.88 per hour. (See Ex. 485.) Either way, CMI's delays resulted in an extra \$15,282 in management costs for B&W Y-12. While B&W Y-12 does not discuss whether the \$101.88 rate includes a profit margin, the court assumes that it does. The court has not relied solely on Trial Exhibit 485 to determine that the \$101.88 rate is reasonable, but finds that the hourly STR rate is similar to the rate for CMI's Project Manager, which was \$96.56. (See Ex. 457.) The court therefore holds that, like the BOA rates for CMI's Project Manager, the STR rates include a ten percent profit charge. As a result, the court finds that it is equitable to reduce B&W Y-12's award for management costs in the same manner that the court has reduced CMI's award for management costs under Section 48 of the General Terms and Conditions. Applying this reduction, B&W Y-12 may recover \$13,892.73.

While B&W Y-12 did not give CMI formal notice that it would seek to charge it for these management expenses, the lack of notice here does not bar B&W Y-12's recovery. Even if B&W Y-12 had been clear that it would later ask CMI to reimburse it for its extra management fees, it is doubtful that CMI would have performed any differently, since these costs are directly linked to the overall duration of the Project.

As a result, the court awards B&W Y-12 \$13,892.73 for the additional hours that B&W

Y-12's STR spent on the Project because of CMI's delays.

V. Summary of Damages

The court has awarded CMI \$303,147.86 under Modification No. 1 and \$289,506.87 under Modification No. 4. The court has also awarded B&W Y-12 \$5,000 for the cost of the valves it provided to CMI and \$13,892.73 for additional management expenses. The awards for B&W Y-12's counterclaims are properly seen as adjustments to CMI's overall award, since the court has used its powers of equity to consider these costs. And because the costs for valves and additional management expenses occurred after July 2, 2009, these expenses should be used to reduce CMI's award under Modification No. 4. As a result, CMI should be awarded \$303,147.86 under Modification No. 1 and \$270,614.14 under Modification No. 4.

The court holds that CMI is entitled to pre-judgment interest on its claims. The evidence at trial established that CMI submitted a Certified Claim for Modification No. 1 on December 9, 2009 (Ex. 407) and submitted its Pay Application No. 7 on December 23, 2009 (Ex. 411). This pay application included the adjustment for Modification No. 1. The evidence at trial also established that CMI submitted a Certified Claim for Modification No. 4 on December 17, 2009 (Ex. 410) and submitted its Pay Application No. 9 on January 7, 2010 (Ex. 415). This pay application included the adjustment for Modification No. 4. Accordingly, the court finds that the interest runs from December 23, 2009, on the recovery allowed for CMI's claim under Modification No. 1 and that interest runs from January 7, 2010, on the recovery allowed for CMI's claim under Modification No. 4.

At trial, CMI submitted an interest calculation based on the U.S. Treasury rate. (Ex. 462.) In its Proposed Findings of Fact and Conclusions of Law, CMI asks the court to calculate the

interest at a higher rate allowed by Tennessee law. The court does not believe that this higher interest calculation is merited. Section 26 of the General Terms and Conditions of the Subcontract provides that the interest rate will be established by the Secretary of Treasury under Section 12 of the Contract Disputes Act. (Ex. 2 ¶ 26.) While the first sentence of this provision refers to amounts due to B&W Y-12 by CMI, the court finds that the same method should be used to calculate interest on amounts due to CMI by B&W Y-12. Using the calculation that CMI provided at trial with the court's revised amount of damages, the court calculates interest on both claims as follow:

Modification No. 1: \$303,147.86					
	Begin	End	# of Days	Annual Rate ²⁶	Amount
Period 1	12/23/09	12/31/09	8	4.875 %	\$323.91
Period 2	1/1/09	6/30/10	181	3.250 %	\$4,885.66
Period 3	7/1/10	12/31/10	184	3.125 %	\$4,775.62
Period 4	1/1/10	6/30/11	181	2.625 %	\$3,946.11
Period 5	7/1/11	12/31/11	184	2.500 %	\$3,820.49
Period 6	1/1/11	6/30/12	181	2.000 %	\$3,006.56
Period 7	7/1/12	12/31/12	184	1.750 %	\$2,674.35
Period	1/1/13	1/4/13	4	1.375 %	\$45.68
Total Interest					\$23,478.39

²⁶These rates are published in the Federal Register and may be found at http://www.treasurydirect.gov/govt/rates/tc/tc/tc_opdprmt2.htm (last accessed Jan. 4, 2013).

Modification No. 4: \$270,614.14

	Begin	End	# of Days	Annual Rate	Amount
Period 1	1/7/10	6/30/10	175	3.250 %	\$4,216.76
Period 2	7/1/10	12/31/10	184	3.125 %	\$4,263.10
Period 3	1/1/10	6/30/11	181	2.625 %	\$3,522.62
Period 4	7/1/11	12/31/11	184	2.500 %	\$3,410.48
Period 5	1/1/11	6/30/12	181	2.000 %	\$2,683.90
Period 6	7/1/12	12/31/12	184	1.750 %	\$2,387.34
Period 7	1/1/13	1/4/13	4	1.375 %	\$40.78
Total Interest					\$20,524.97

Based on these calculations, the court awards CMI \$23,478.39 in pre-judgment interest for its claim under Modification No. 1 and \$20,524.97 in pre-judgment interest for its claim under Modification No. 4.

CONCLUSION

The court has analyzed in detail the parties' various arguments in this complex dispute. The court also finds it useful to look at the issue from a more general perspective. The court finds that CMI is entitled to an equitable adjustment because the Project took far longer than was scheduled. These delays were caused in large part due to the lack of accurate site drawings, for which B&W Y-12 must bear responsibility, and B&W Y-12's failure to provide adequate excavation support that would have allowed CMI to follow its submitted schedule. On the basis of the testimony presented at the five-day bench trial, and on the basis of the numerous exhibits and depositions submitted by the parties, the court finds that B&W Y-12 is responsible for three quarters of the Project delays. The court finds that CMI caused the remaining quarter of the

Project delays for a number of reasons discussed above. The court made a number of estimates in order to calculate the damages caused by these delays. It has used its equitable powers to do so, and has carefully balanced estimates that are likely to be somewhat high in some instances with estimates that are likely to be somewhat low in others. Its final calculation (\$303,147.86 for Modification No. 1 and \$270,614.14 for Modification No. 4) awards CMI almost exactly 75% of the total amount (\$771,908.80) that CMI sought for these modifications. The court finds that its overall damages award therefore mirrors its finding and general conclusion that B&W Y-12 was responsible for 75% of the Project delays.

The court summarizes the damages it awards to CMI as follows:

Modification No. 1	\$303,147.86
Interest for Modification No. 1	\$23,478.39
Modification No. 4	\$270,614.14
Interest for Modification No. 4	\$20,524.97
Total Award	\$617,765.36

The court holds that CMI is entitled to recover \$617,765.36 from B&W Y-12.

SO ORDERED this 4th day of January, 2013.

BY THE COURT:



TENA CAMPBELL
United States District Judge

ENTERED AS A JUDGMENT
s/ Debra C. Poplin
CLERK OF COURT